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**CLOSEOUT REPORT
FOR IHSS GROUPS 100-4
(UBC 123, IHSS 148, PAC 100-611)
AND 100-5 (PAC 100-609)**

Approval received from the Colorado Department of Public Health and Environment

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1
176

TABLE OF CONTENTS

EXECUTIVE SUMMARY	vi
1.0 INTRODUCTION.....	1
2.0 IHSS GROUP 100-4 ACTIVITIES	3
2.1 Site Characterization	3
2.1.1 UBC 123, Radiological Health Physics Laboratory.....	3
2.1.2 IHSS 100-148--Waste Leaks	6
2.1.3 PAC 100-603--Bioassay Waste Spill.....	7
2.1.4 PAC 100-611--Building 123 Scrubber Solution Spill	7
2.1.5 Analytical Data -- UBC 123 and IHSS 148	7
2.1.6 Analytical Data--PAC 100-611--Building 123 Scrubber Solution Spill.....	8
2.2 Accelerated Action Description.....	8
2.2.1 Area of Concern	8
2.2.2 Removal Activities	15
2.3 Confirmation Sampling.....	21
2.4 RCRA Unit Closure	25
2.5 Deviations from the ER RSOP	32
2.6 Waste Management.....	33
2.7 Site Reclamation	38
2.8 Accelerated Action Goals	38
2.9 No Longer Representative Sampling Locations	40
3.0 POST-REMEDIATION CONDITIONS.....	42
3.1.1 UBC 123, Radiological Health Physics Laboratory.....	42
3.1.2 IHSS 100-148, Waste Leaks	42
3.1.3 PAC 100-603, Bioassay Waste Spill.....	42
3.1.4 PAC 100-611, Building 123 Scrubber Solution Spill	42
3.1.5 Residual Contamination	42
4.0 STEWARDSHIP EVALUATION.....	49
4.1 Current Site Conditions.....	49
4.2 Near Term Management Recommendations.....	50
4.3 Long-Term Stewardship Recommendations.....	50
4.4 Accelerated Action Stewardship.....	51
5.0 DATA QUALITY ASSESSMENT	51
5.1 DQO Decisions	52
5.2 Verification and Validation of Results.....	52
5.3 Data Quality Summary.....	57
6.0 IHSS GROUP 100-5 ACTIVITIES	57
6.1 Site Characterization	57
6.2 Accelerated Action Description	58
6.2.1 Area of Concern	58
6.2.2 Removal Activities	65
6.3 Deviations from the ER RSOP	65
6.4 Waste Management.....	65
6.5 Site Reclamation	65
7.0 POST-REMEDIATION CONDITIONS	65
8.0 STEWARDSHIP EVALUATION	66
8.1 Current Site Conditions.....	66

8.2	Near Term Management Recommendations.....	66
8.3	Long-Term Stewardship Recommendation	66
8.3.1	Accelerated Action Stewardship	67
9.0	DATA QUALITY ASSESSMENT	67
9.1.1	DQO Decisions	68
9.1.2	Verification and Validation of Results	68
9.1.3	Data Quality Summary	71
10.0	REFERENCES	72

LIST OF FIGURES

Figure 1	Location Map-IHSS Group 100-4.....	4
Figure 2	IHSS Group 100-4	5
Figure 3	Location of Pre-Accelerated Action Sample Results Above Detection Limits or Background Levels for IA Group 100-4	9
Figure 4	Location of Pre-Accelerated Action Sample Results Above Detection Limits or Background Levels Collected at UBC 123 (IHSS Group 100-4) in November 2000	10
Figure 5	Characterization Sampling Locations and Results at PAC 100-611	12
Figure 6	IHSS Group 100-4-Area of Concern	14
Figure 7	IHSS Group 100-4 Process Waste Lines	17
Figure 8	Location of Soil Stockpiles.....	19
Figure 9	Planned Confirmation Sampling Locations	20
Figure 10	Actual Confirmation Sampling Locations	22
Figure 11	Confirmation Sampling Results Greater Than Background Plus Two Standard Deviations or Method Detection Limits	27
Figure 12	RFCA Tier II Radionuclide Sum of Ratios	28
Figure 13	RFCA Tier II Nonradionuclide Sum of Ratios	29
Figure 14	UBC 123 RCRA Unit 40	31
Figure 15	RCRA Unit 40 Pipeline Removed and Left in Place.....	34
Figure 16	No Longer Representative Sampling Locations at IHSS Group 100-4	41
Figure 17	Residual Contamination at IHSS Group 100-4.....	46
Figure 18	NPWL and OPWL Pipelines Left in Place	48
Figure 19	IHSS Group 100-5 Area of Concern.....	61
Figure 20	Sampling Results Greater Than Method Detection Limits at IHSS Group 100-5.....	62
Figure 21	RFCA Tier II Nonradionuclide Sum of Ratios for IHSS Group 100-5	63

LIST OF TABLES

Table 1	PAC 100-611-Characterization Sampling Specifications	11
Table 2	PAC 100-611-Characterization Data.....	13
Table 3	Dates of Accelerated Action Activities	15
Table 4	Process Waste Line Summary.....	21
Table 5	IHSS Group 100-4-Confirmation Sampling Specifications.....	23
Table 6	Confirmation Sampling Results Greater Than Background Plus Two Standard Deviations or Method Detection Limits.....	26
Table 7	RFCA Tier II Sum of Ratios	30
Table 8	Planned Versus Actual Sampling Locations	32
Table 9	Waste Characterization Summary.....	35
Table 10	Waste Characterization Data Summary-Detected Analytes.....	39
Table 11	No Longer Representative Sampling Locations.....	40
Table 12	Residual Contamination at IHSS Group 100-4.....	43
Table 13	Residual Contamination Location Information.....	47
Table 14	IHSS Group 100-4-Sample Completeness Summary	55
Table 15	IHSS Group 100-4 - Verification & Validation for Electronic Data Deliverable Records.....	56
Table 16	IHSS Group 100-4 Analytes with Detection Limits Exceeding Tier I Action Levels.....	57
Table 17	IHSS Group 100-4 Analytes with Detection Limits Exceeding Tier II Action Levels.....	57
Table 18	IHSS Group 100-5, PAC 100-609-Characterization Sampling Specifications	59
Table 19	IHSS Group 100-5, PAC 100-609-Characterization Data Summary.....	60
Table 20	IHSS Group 100-5-Toxicity Equivalent Comparison	64
Table 21	Summed TEQs by Sample Location	64
Table 22	Dates and Duration of Accelerated Action Activities	65
Table 23	IHSS Group 100-5-Sampling	68
Table 24	IHSS Group 100-5-Sample Completeness Summary	70
Table 25	IHSS Group 100-5-Summary of Validated Records.....	70

LIST OF APPENDICES

Appendix A - Project Photographs
Appendix B - Analytical Data
Appendix C - Correspondence
Appendix D - IHSS Group 100-4 Proposed RFCA Action Levels
Appendix E - IHSS Group 100-5 Proposed RFCA Action Levels

ACRONYMS

ACM	asbestos containing material
AL	action level
AOC	Area of Concern
AR	Administrative Record
CAB	cost advantage box
CAD/ROD	Corrective Action Decision/Record of Decision
CEARP	Comprehensive Environmental Assessment and Response Program
CDPHE	Colorado Department of Public Health and Environment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COC	contaminant of concern
CMS	Corrective Measure Study
CPIR	Contingency Plan Implementation Report
CRA	Comprehensive Risk Assessment
D&D	Deactivation and Decommissioning
DL	detection limit
DOE	U.S. Department of Energy
DQA	Data Quality Assessment
DQO	Data Quality Objective
EDD	electronic data deliverable
EPA	U.S. Environmental Protection Agency
ER	Environmental Restoration
ER RSOP	Environmental Restoration RFCA Standard Operating Protocol
FS	Feasibility Study
GPS	Global Positioning System
HDD	Horizontal Directional Drilling
HPGe	High Purity Germanium
HRR	Historical Release Report
IA	Industrial Area
IASAP	Industrial Area Sampling and Analysis Plan
IHSS	Individual Hazardous Substance Site
K-H	Kaiser-Hill Company L.L.C.
lbs	pounds
LCS	laboratory control sample
LD	laboratory duplicate
LLMW	low-level mixed waste
LLW	low-level waste
MDA	minimum detectable activity
MDL	method detection limit
mg/kg	milligrams per kilogram
MH	manhole
MS	matrix spike
MSD	matrix spike duplicate
NA	not applicable
NCR	no carbon required
ND	not detected
NFA	No Further Action

NLR	No Longer Representative
NPWL	New Process Waste Lines
NTS	Nevada Test Site
OPWL	Original Process Waste Lines
OU	Operable Unit
PAC	Potential Area of Concern
PAM	Proposed Action Memorandum
PARCCS	precision, accuracy, representativeness, completeness, comparability, and sensitivity
PCB	polychlorinated biphenyl
pCi/g	picocuries per gram
PCOC	potential contaminant of concern
pg/g	picograms per gram
ppb	parts per billion
ppt	parts per trillion
QC	Quality Control
RAO	Remedial Action Objective
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
RFCA	Rocky Flats Cleanup Agreement
RFETS	Rocky Flats Environmental Technology Site
RI	Remedial Investigation
RISS	Remediation, Industrial D&D, & Site Services
RL	Recoverable Limit
RMRS	Rocky Mountain Remediation Services
RPD	relative percent difference
RQL	required quantitation limit
RSOP	RFCA Standard Operating Protocol
SAP	Sampling and Analysis Plan
Site	Rocky Flats Environmental Technology Site
SOP	standard operating procedure
SOR	Sum of Ratio
SU	Standard Unit
SVOC	semivolatile organic compound
TCLP	Toxicity Characteristic Leaching Procedure
TEF	toxicity equivalent factor
TEQ	toxicity equivalents
UBC	Under Building Contamination
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
VOC	volatile organic compound
V&V	verification and validation
WRW	Wildlife Refuge Worker

EXECUTIVE SUMMARY

This closeout report summarizes accelerated action activities conducted at Individual Hazardous Substance Site (IHSS) Groups 100-4 and 100-5, which is located at the Rocky Flats Environmental Technology Site. Activities were planned and executed in accordance with the Industrial Area (IA) Sampling and Analysis Plan, the IASAP Addendum #IA-02-01, and the Environmental Restoration (ER) Rocky Flats Cleanup Agreement (RFCA) Standard Operating Protocol for Routine Soil Remediation (ER RSOP). Notification of the planned characterization and removal activities was provided in ER RSOP Notification #02-01.

IHSS Group 100-4 includes Under Building Contamination Site (UBC) 123 (Radiological Health Physics Laboratory), IHSS 100-48 (Waste Leaks), Potential Area of Concern (PAC) 100-603 (Bioassay Waste Spill), and PAC 100-611 (Building 123 Scrubber Solution Spill). The Area of Concern (AOC) and associated remedial action objectives were determined based on data collected during the characterization of UBC 123 and data collected during previous studies of the area. Accelerated action activities were conducted from February 5, 2002 through April 19, 2002. During this time, the Building 123 slab was removed, as were belowgrade features, including the building footers, source pits, manholes, sumps, and process waste lines regulated under the Resource Conservation and Recover Act (RCRA). In addition, soils contaminated with lead and semi-volatile organic compounds (SVOCs) were removed and confirmation samples were collected verify cleanup levels. Confirmation sampling results indicated that all contaminant concentrations were less than RFCA Tier I Action Levels (ALs) and proposed Wildlife Refuge Worker (WRW) and ecological ALs. The data were verified and validated in accordance with the Data Quality Objective/Data Quality Assessment (DQO/DQA), as described in the IASAP. Waste from IHSS Group 100-4 included concrete, pipeline, asphalt, and soil. Clean concrete was segregated and recycled in accordance with the RSOP for Recycling Concrete. Other wastes were managed in accordance with the ER Waste Management Plan. Excavated areas were backfilled and the entire area was rough-graded before topsoil was distributed and the area was seeded with Canada Bluegrass.

IHSS Group 100-4 removal activities were consistent with and contributed to the ER RSOP overall long-term remedial action objectives for RFETS soil. The removal of concrete items, including sumps and tanks, and portions of the OPWL and NPWL, and the disruption of remaining lines contributed to the protection of human health and the environment, because potential sources of contamination were removed or isolated. These actions also minimized the need for long-term maintenance and institutional or engineering controls because potential sources of contamination were removed or isolated. In addition, best management practices were used during the accelerated action to prevent the spread of contamination during the accelerated action (e.g., erosion and duct controls). Air monitoring data during the accelerated action did not indicate any exceedances.

Even though some process waste lines remain, no Group-specific, near-term management techniques are required. Remaining lines have been isolated (grouted). Excavation at the site will continue to be controlled through the Site Soil Disturbance Permit process. Fencing and signs restricting access will be posted to minimize disturbance to newly-revegetated areas. Site access and security controls and the Soil Disturbance Permit process will remain in place pending implementation of long-term controls.

IHSS Group 100-5 consists of PAC 100-609 (Building 121 Security Incinerator). The AOC and associated remedial action objectives were determined based on sampling performed in accordance with the IASAP. Accelerated action activities were conducted on March 6, 2002. At that time, the Building 121 slabs were removed and managed in accordance with the RSOP for Recycling Concrete. No soil was removed because analytical results indicated that dioxin and furan congener concentrations were below the EPA cleanup guidelines and PCBs were less than RFCA Tier II ALs. PCBs concentrations were also less than proposed WRW ALs. There are no proposed WRW ALs for dioxin and furan congeners. The data were verified and validated in accordance with the DQO/DQA, as described in the IASAP.

IHSS Group 100-5 removal activities were consistent with and contributed to the ER RSOP overall long-term remedial action objectives for RFETS soil. The removal of the concrete slab contributed to the protection of human health and the environment, because potential sources of contamination were removed or isolated. These actions also minimized the need for long-term maintenance and institutional or engineering controls because potential sources of contamination were removed or isolated. In addition, best management practices were used during the accelerated action to prevent the spread of contamination during the accelerated action (e.g., erosion and duct controls). Air monitoring data during the accelerated action did not indicate any exceedances.

No Group-specific, near-term management techniques are required. Excavation at the site will continue to be controlled through the Site Soil Disturbance Permit process. Fencing and signs restricting access will be posted to minimize disturbance to newly-revegetated areas. Site access and security controls and the Soil Disturbance Permit process will remain in place pending implementation of long-term controls.

The presence of residual contamination in soil will be analyzed in the Site Wide Comprehensive Risk Assessment, which is part of the RCRA Facility Investigation/Remedial Investigation (RFI/RI) and Corrective Measures Study/Feasibility Study (CMS/FS) that will be conducted for the Site. The need for and extent of any, more general, long-term stewardship activities will also be analyzed in the RFI/RI and CMS/FS and will be proposed as part of the preferred alternative in the Proposed Plan for the Site. Institutional controls and other long-term stewardship requirements for Rocky Flats will ultimately be contained in the Corrective Action Decision/Record of Decision, in any post-closure Colorado Hazardous Waste Act permit that may be required, and in any post-RFCA agreement.

No long-term stewardship activities are recommended for IHSS Groups 100-4 or 100-5 beyond the generally applicable Site requirements that may be imposed on this area in the future, which are dependent upon the final remedy selected. Institutional controls that will be used as appropriate for this area include prohibitions on construction of buildings in the IA, restrictions on excavation or other soil disturbance, or prohibitions on groundwater pumping in the area of IHSS Groups 100-4 and 100-5. No specific engineered controls or environmental monitoring are anticipated as a result of the conditions remaining in IHSS Groups 100-4 and 100-5.

This closeout report and associated documentation will be retained as part of the Rocky Flats administrative record file. These specific long-term stewardship recommendations will also be summarized in the Rocky Flats *Long-Term Stewardship Strategy*.

1.0 INTRODUCTION

This closeout report summarizes characterization and accelerated action activities conducted at Individual Hazardous Substance Site (IHSS) Group 100-4 (UBC 123, IHSS 148, PAC 100-611 and IHSS Group 100-5 (PAC 100-609) at the Rocky Flats Environmental Technology Site (RFETS or Site) in Golden, Colorado. Accelerated action activities were planned and executed in accordance with the Industrial Area (IA) Sampling and Analysis Plan (SAP) (DOE 2001a), IASAP Addendum #IA-02-01 (DOE 2001b), and the Environmental Restoration (ER) Rocky Flats Cleanup Agreement (RFCA) Standard Operating Protocol (RSOP) for Routine Soil Remediation (ER RSOP) (DOE 2002a). Notification of the planned activities was provided in ER RSOP Notification #02-01 (DOE 2002b), which was approved by the Colorado Department of Public Health and Environment (CDPHE) on January 16, 2002 (CDPHE 2002).

Approval of this Closeout Report constitutes regulatory agency concurrence that these IHSS Groups are No Further Actions (NFAs). This information and NFA determination will be documented in the FY03 Historical Release Report (HRR).

This report contains the information necessary to demonstrate attainment of cleanup objectives and final closure of IHSS Groups 100-4 and 100-5. This information includes:

- Site Characterization Information
 - Description of site characterization activities, and
 - Site characterization data, including data tables and maps;
- Site Accelerated Action Information
 - Description of the accelerated action, including the rationale for the action and map of the target remediation area,
 - Map of the actual remediation area, including bounds of the excavation, and dates and durations of specific remedial activities,
 - Photographs documenting site characterization, remediation, and reclamation activities;
- Confirmation sampling data, including data tables and location maps, as well as a comparison of the confirmation data to applicable cleanup goals;
- Description of Resource Conservation and Recovery Act (RCRA) unit closure activities;
- Description of deviations from the ER RSOP;
- Description of near-term stewardship actions and long-term stewardship recommendations;
- Description of site condition after remediation, including a map of residual contamination above background plus two standard deviations, method detection limits (MDLs), and Tier II Action Levels (ALs);
- Disposition of wastes;
- Site reclamation;

- Table of No Longer Representative (NLR) locations and sample numbers that have been remediated. These data will be used to mark database records so they are not used in the Comprehensive Risk Assessment (CRA) or other Site analyses; and
- Data quality assessment (DQA), including comparison of confirmation data with project data quality objectives (DQOs).

2.0 IHSS GROUP 100-4 ACTIVITIES

IHSS Group 100-4 consists of the following IHSSs, Under Building Contamination (UBC) sites, and Potential Areas of Concern (PACs):

- UBC 123, Radiological Health Physics Laboratory;
- IHSS 100-148, Waste Leaks;
- PAC 100-603, Bioassay Waste Spill; and
- PAC 100-611, Building 123 Scrubber Solution Spill.

The location of IHSS Group 100-4 is shown on Figure 1, and the IHSSs, PACs, and UBC sites are shown on Figure 2.

2.1 Site Characterization

IHSS Group 100-4 characterization information consists of historical knowledge and previously collected analytical data. Historical information for each IHSS, PAC, and UBC is presented below. IHSS Group 100-4 analytical data are presented in Section 2.1.5.

2.1.1 UBC 123, Radiological Health Physics Laboratory

Building 123 was located on Central Avenue, between Third and Fourth Streets. The original building was constructed in 1953, with additions completed in 1968, 1972, and 1974. Building 123 housed the Site's Radiological Health Physics Laboratory, where water, biological materials, soil, air, and filter samples were analyzed for the presence of plutonium; americium; uranium; alpha, beta, and gamma radiation; tritium; beryllium; and organic constituents. In addition, personnel radiation badges were counted and repaired in Building 123. Radioactive sources, including cesium, were stored in a below-grade concrete pit. Low-level liquid and chemical wastes were generated and transferred to onsite treatment systems via the process waste transfer and collection system (DOE 1992). Portions of RCRA Unit 40, including sumps and pipes, were part of UBC 123. Some of the underground process waste lines associated with Building 123 were abandoned in place and plugged with cement in 1982 (i.e., Original Process Waste Lines [OPWL]), while others remained in active use until laboratory operations were suspended in preparation for facility decommissioning (e.g., New Process Waste Lines [NPWL]). The process waste lines are shown on Figure 2.

Building 123 was decommissioned in 1998 in accordance with the Proposed Action Memorandum (PAM) for the Decommissioning of Building 123 (RMRS 1998a). At that time, the building structure and aboveground portions of the process waste system were removed, and the floor slab was sampled to assess areas of potential contamination. Contaminated portions of the slab that could not be decontaminated to meet the applicable unrestricted release criteria were encapsulated with epoxy paint to fix removable contamination and covered with steel plate. In addition, the underground sumps, pipe chases, and the process waste lines that ran from Room 156, through Rooms 157 and 158, to Valve Vault 18, were clean closed in place in accordance with the Closure Plan for the Building 123 Components of RCRA

Unit 40 (RMRS 1997). Partial closure was certified by a Colorado-registered professional engineer on May 28, 1998 (RMRS 1998b). A contaminated sump, located in Room 125, was removed during decommissioning. Final disposition of the building slab, underground sumps, process waste lines (including the abandoned lines), and source pits was deferred to the ER Program.

2.1.2 IHSS 100-148--Waste Leaks

The eastern wing of Building 123 is encompassed by IHSS 148. Persons interviewed for the Comprehensive Environmental Assessment and Response Program (CEARP) Phase 1 document indicated that several small spills of nitrate-bearing wastes occurred around the outside of Building 123. These wastes may have contained radionuclides. Additionally, interviewees indicated that there were potential releases of nitrate-bearing wastes from the OPWL buried beneath Building 123. This pipeline was in use from the start of operations in Building 123 until the OPWL were replaced by the NPWL.

Building 123 was serviced by a 4-inch-diameter process waste line (P-1) buried beneath the north and east wings of the building. The main process waste line drained from west to east in the north wing, and from north to south in the east wing. The pipe was sloped at 1 percent. A number of connections were made to the main pipe, some of which consisted of headers servicing process waste drains in the building. The pipe was probably constructed of a type of iron called "Duriron." The OPWL piping from Building 123 led to an underground tank system behind Building 441 that collected wastes generated by both Buildings 123 and 441. From this tank system, the process waste materials were pumped out for treatment in the process waste system (DOE 1992).

The OPWL drain was not double-contained, and it varied in depth from approximately 0.5 to 3.0 feet beneath the concrete floor of Building 123. The line came out from beneath the southern end of the east wing of the building, with an invert elevation of approximately 6,032.5 feet. Interviewees have stated that this line may have leaked without personnel being aware of it. The types of waste consisted of laboratory wastes from analysis of urine, fecal, and other bioassay samples. Nitrates and low levels of radionuclides were associated with the wastes carried in the OPWL. The NPWL that replaced the OPWL consisted of either double-contained underground or overhead lines (DOE 2000b).

Surface soil samples were collected and analyzed as part of the Operable Unit (OU 13) RCRA Facility Investigation/Remedial Investigation (RFI/RI). Thirty-four analytes were detected in the surface soil samples, including 26 inorganic compounds and 8 radionuclides. Eleven analytes exceeded background concentrations at a minimum of one sampling location throughout IHSS 148. Constituents that exceeded background concentrations were chromium, cobalt, copper, lead, nickel, strontium, zinc, americium-241, plutonium-239/240, uranium-233/234, and uranium-238. These data are available in the IA Data Summary Report (DOE 2000b).

Previously, a soil gas survey was conducted on a 25-foot grid and samples were analyzed in the field using gas chromatography/mass spectrometry. Sixty-four soil gas locations were sampled, and 13 samples contained volatile organic compound (VOC) levels in excess of the 1 microgram per liter ($\mu\text{g/L}$) MDL. Benzene, toluene, ethylbenzene, xylene, and fuel constituents were detected in samples collected from the perimeter of Building 123 and within the east and west wings of the building. Trichlorofluoromethane was detected in nine samples distributed throughout the IHSS 148 area at levels up to 2.6 $\mu\text{g/L}$. Tetrachloroethene was detected at 1.5 $\mu\text{g/L}$ in a sample collected east of Building 123.

Unconfirmed reports of contaminant spills were indicated in interviews with building employees. In the late 1960s or early 1970s, a cesium-contaminated liquid was reportedly spilled on the concrete floor in Room 109. The floor was immediately sealed to immobilize the contamination. Room 109 also contained source storage pits. Undocumented thorium research was performed in Room 105. Scoping surveys conducted in May through July 1997 revealed elevated levels of radioactivity in both Rooms 105 and 109. In-situ gamma spectroscopy measurements performed in August 1997 indicated the presence of cesium-137 and thorium-232 in Rooms 109 and 105, respectively (RMRS 1998c).

2.1.3 PAC 100-603–Bioassay Waste Spill

PAC 100-603 was approved as a NFA site in 2002 (CDPHE 2002). A description of this PAC is contained in the Annual Update for the Historical Release Report (DOE 2001c).

2.1.4 PAC 100-611–Building 123 Scrubber Solution Spill

An inoperative pump in the Building 123 process waste transfer system caused the Building 123 scrubber system to overflow, spilling scrubbing solution into a bermed area outside of the building and into three pits beneath the floor of the building. Also, approximately 5 gallons of liquid were present in and around a nearby storm water drainage ditch that served the Building 123 parking lot. It was speculated that this liquid leaked from the berm wall interface with the underlying asphalt. The 5 gallons of liquid in the parking lot drainage ditch did not react when sodium bicarbonate was applied, indicating it was not acidic and therefore, was not the scrubbing solution. All of the spilled solution was contained within secondary containment structures, and none of the solution was believed to have impacted the environment (DOE 1992).

Under normal operating conditions, the scrubbing solution drained into the process waste system when the scrubbing process was completed. The source of the problem was waste pump switches that were in the wrong position, as well as the influent valve that was blocked by glass filtering wool from Building 123. The scrubbing solution consisted primarily of water, which was used to scrub nitric acid, hydrofluoric acid, and hydrochloric acid used in Building 123.

Approximately 50 gallons were released to the bermed area, and several hundred gallons were contained in the three pits beneath the Building 123 floor. Analyses showed the solution in the bermed area had a pH of 1.6, while the solution in the three pits had a pH of 6.0 (DOE 1992).

Normal scrubbing solution drainage was restored when the glass wool material was cleared and the inoperative process waste pump was restarted. A submersible pump was used to transfer the scrubbing solution from the bermed area to process waste drains in Building 123. Measures were proposed to prevent subsequent buildup of glass wool in the process waste system. A RCRA Contingency Plan Implementation Report (CPIR) (89-019) was written (DOE 1992).

2.1.5 Analytical Data – UBC 123 and IHSS 148

As described in IASAP Addendum #IA-02-01 (DOE 2001b), potential contaminants of concern (PCOCs) at UBC 123 and IHSS 148 were determined based on data collected during the characterization of UBC 123, as summarized in the Final Data Summary Report for the Characterization of UBCs 123 and 886 (DOE 2001d), and data collected during previous studies (DOE 2001a, DOE 2000a). These pre-accelerated action data, greater than background plus two standard deviations or MDLs, along with RFCA Tier I and Tier II AL values are shown on Figures 3 and 4. Because a sufficient number of samples were collected during previous studies to characterize UBC 123 and IHSS 148, additional characterization was not required at these

sites. Results from previous sampling and analysis of surface and subsurface soils at UBC 123 and IHSS 148 indicated that:

- Lead was detected in subsurface soils above the Tier I AL at one location;
- The organics 2-4 dinitrotoluene and n-nitroso-di-n-propylamine, were detected above the RFCA Tier I Sum of Ratios (SORs) in surface soil at one location;
- Radionuclides and metals were detected at concentrations above background plus two standard deviations at UBC 123 and IHSS 148;
- Arsenic exceeding the Tier II AL but below background was detected at one location in surface soil;
- Beryllium exceeding the Tier II AL was detected at one location in surface soil; and
- Methylene chloride was detected in subsurface soil at levels slightly above the RFCA Tier II AL.

2.1.6 Analytical Data—PAC 100-611—Building 123 Scrubber Solution Spill

PAC 100-611 was not characterized prior to this accelerated action. Characterization sampling locations and specifications for PAC 100-611 were described in IASAP Addendum #IA-02-01 (DOE 2001b). The sampling specifications for the five characterization samples collected and analyzed for pH are listed in Table 1. The location of these samples and analytical results are shown on Figure 5. Analytical results are presented in Table 2.

2.2 Accelerated Action Description

Accelerated action activities including a description of the Area of Concern (AOC) and removal activities are described below.

2.2.1 Area of Concern

The AOC, shown on Figure 6, was determined based on analytical results from pre-accelerated action studies (Figures 3 and 4) (DOE 2000a, DOE 2001a, and DOE 2001c) described in Section 2.1.5. The AOC is defined as the area, not individual points, with a concentration of contaminants greater than background mean plus two standard deviations or MDLs. The AOC map also illustrates the limits of RFCA Tier II and Tier I exceedances. As shown on Figure 6 the Tier I SOR was exceeded (was greater than 1) at two locations. At the first location, near the north-central portion of the slab, subsurface soil lead concentrations were elevated at approximately one foot beneath the slab. At the second location, adjacent to the southwest corner of the slab, surface soil semivolatile organic compound (SVOC) concentrations were elevated.

Table 1
PAC 100-611-Characterization Sampling Specifications

IHSS Group	IHSS/PAC/UBC Site	Location Code	Easting	Northing	Medium	Depth Interval (ft)	Analyte	Laboratory Method
100-4	PAC 100-611 – Building 123 Scrubber Solution Spill	BU38-0010	2081738.50	749033.50	Surface Soil	0'-.5'	pH	9045
		BU38-0012	2081723.92	749042.34	Surface Soil	0'-.5'	pH	9045
		BU38-0013	2081731.33	749042.66	Surface Soil	0'-.5'	pH	9045
		BU38-0014	2081727.14	749039.11	Surface Soil	0'-.5'	pH	9045
		BU38-0015	2081723.59	749036.53	Surface Soil	0'-.5'	pH	9045

Table 2
PAC 100-611-Characterization Data

IHSS Group	IHSS/PAC/UBC Site	Location Code	Analyte	Result (SU)	MDL	Background Plus Two Standard Deviations	Tier II AL	Tier I AL
100-4	PAC 100-611 – Building 123 Scrubber Solution Spill	BU38-0010	pH	8.4	NA	NA	NA	NA
		BU38-0012	pH	8.8	NA	NA	NA	NA
		BU38-0013	pH	8.8	NA	NA	NA	NA
		BU38-0014	pH	8.7	NA	NA	NA	NA
		BU38-0015	pH	8.8	NA	NA	NA	NA

NA Not Applicable
SU Standard Unit

Based on these data, accelerated action objectives were developed and described in ER RSOP Notification #02-01 (DOE 2002b). The accelerated action objectives for IHSS Group 100-4 included the following:

- Remove the Building 123 slab, footers, source pits, and manholes and, if appropriate, recycle in accordance with the RSOP for Recycling Concrete (DOE 1999a);
- Remove the below-grade sumps and process waste lines to Valve Vault 18;
- Remove soil with contaminant concentrations greater than RFCA Tier I ALs; and
- Collect confirmation samples in accordance with the IASAP (DOE 2001a).

Remediation activities were conducted between January 29 and April 18, 2002. Start and end dates of significant activities are listed in Table 3.

Table 3
Dates of Accelerated Action Activities

Activity	Start Date	End Date	Duration
Characterization Sampling at PAC 100-611	February 5, 2002	February 5, 2002	1 Day
Removal Activities	January 31, 2002	April 2, 2002	61 Days
Backfill Excavations	February 15, 2002	April 4, 2002	49 Days
Reseed	April 18, 2002	April 18, 2002	1 Day

Photographs of site activities are provided in Appendix A.

2.2.2 Removal Activities

ER RSOP Notification #02-01 accelerated action project objectives were achieved through the following:

- Removal of the concrete slab and associated structures;
- Removal of below-grade sumps and process waste lines; and
- Removal of soil with contaminant concentrations greater than RFCA Tier I ALs.

These removal activities are described below.

Building 123 Slab, Footers, Source Pits, and Manholes

The Building 123 slab was broken up and removed using an excavator with a hydraulic hammer and bucket/thumb attachment (Photograph 1, Appendix A). As the concrete slab was excavated, the underneath side of the concrete was scanned with an NE Electra to determine if radionuclides were present. Concrete with fixed contamination covered with steel plates was cut out of the slab using a concrete saw. The cut concrete was then removed from the slab using the excavator with bucket/thumb attachment. Additionally eight samples were collected from the concrete for waste characterization. Analytical results are presented in the Section 2.6. Concrete that was not contaminated was recycled in accordance with the RSOP for Recycling Concrete (DOE 1999a).

Concrete that was determined contaminated or with known fixed contamination was removed and will be transported to the Nevada Test Site (NTS) for disposal as low-level waste (LLW).

Concrete building footers (Photograph 2, Appendix A) were excavated and scanned with an NE Electra to determine if radionuclides were present. Concrete was recycled in accordance with the RSOP for Recycling Concrete (DOE 1999a).

The 18-foot-long cesium-137 source well (Photographs 3 and 4, Appendix A) was removed. The source well piping consisted of 18-inch diameter corrugated steel pipe with a slightly smaller diameter stainless steel liner pipe. A stainless steel bottom was welded to the bottom of the corrugated pipe. The source well appeared to be filled with concrete. It was excavated in one piece and no significant corrosion was observed on the corrugated pipe surface. No contamination was observed on the pipe surface or on the bottom of the pipe. Positive analytical results are presented in Section 2.6 and all analytical data are presented in Appendix B. Groundwater was observed approximately 5 feet below the top of the pipe. This groundwater was not sampled. The source well was packaged and will be transported to NTS for disposal as LLW.

Once removed, samples were collected from soil beneath the bottom of the source well pipe and from soil adhered to the bottom of the pipe for radionuclide analyses. All results were less than RFCA Tier II ALs. The source well was backfilled with the excavated sand (Photograph 5, Appendix A). Samples were also collected from the stockpile of sand removed from around the pipe. Because of the depth of the source well excavation (approximately 20 feet) and associated hazards and weather issues, the excavation was immediately backfilled following sampling of the excavation (Appendix A, Photograph 5).

Manhole (MH)-1 and MH-2 (Appendix A, Photograph 6), and the approximately 5'x5' concrete slabs beneath the manholes were excavated. Soil samples were collected from beneath the manhole slab and are presented in Section 2.3, Confirmation Sampling. The concrete manholes and slabs were packaged and will be transported to NTS for disposal as LLW.

Sumps And Process Waste Lines

Sumps, OPWL, and NPWL in IHSS Group 100-4 are shown on Figure 2 and Photographs 8 through 12 in Appendix A. Accelerated action objectives were to remove all sumps and process waste lines within the AOC. Sumps located in the former Rooms 156, 157, and 158 were removed along with more than 1 foot of soil around and beneath the sumps. Pipelines between former Rooms 156 and 157 sump locations and more than 1 foot of soil around and beneath the pipelines were excavated. Additionally, approximately 40 feet of associated 4-inch-diameter stainless steel pipeline was excavated. Contamination was not detected on sumps or associated pipeline. Confirmation samples were collected from beneath each sump location, and one confirmation sample was collected in the pipeline trench between the Room 156 and 157 sump locations. Sumps were packaged and will be transported to NTS for disposal as LLW.

Most OPWL and NPWL in IHSS Group 100-4 were excavated and removed. Figure 7 shows the extent of pipeline removed, pipeline left in place, and pipeline not found. Two pipeline segments

were left in place because of logistical constraints. One to the south of UBC123 and one to the east. The pipeline ends were grouted with Sika Grout 212. These pipelines will be addressed when IHSS 121 (OPWL) and PAC 000-504 (NPWL) are addressed. Removed pipelines were packaged and will be transported to NTS for disposal as LLW.

Overburden was excavated and stockpiled near the pipeline excavations. Figure 8 shows the location of soil piles. As pipeline was removed, it was evaluated to determine whether there were cracks or other evidence of potential leaks.

While pipeline removal was routine, there were several unexpected events.

- At the time of removal, liquid drained from a 4-foot section of the east-west section of P-2, located beneath the former Room 112 (northwestern section of Building 123). The liquid was released when the cast iron pipe broke during removal. The excavation was stopped in this area, and samples of the liquid and soil beneath the liquid were collected. No contamination was detected on the removed pipe or in the liquid. Approximately 1 gallon of liquid was standing in the sand bedding beneath the pipe (Photograph 13, Appendix A). No other liquid was encountered during removal of the east-west section of P-2 pipe.
- Excavation of overburden soil above approximately 35 feet in length of the B123 P-1 process waste pipe extending east from MH-1 was stopped when it was determined that, if continued, the trench would be in close proximity to a known underground communications line in this area. Excavation was continued after evaluation determined it was safe to proceed.
- Two 10-foot sections of steam piping with asbestos-containing insulation were found beneath the northeastern section of the slab, removed, and packaged by an asbestos abatement contractor.
- Unanticipated pipeline was found beneath the northern section of the slab, south of the sumps and removed.
- A sheet of lead (about 2' x 3' x 1/8" thick) was encountered beneath an 8-inch diameter drain located approximately 5 feet south of the lead-contaminated soil location. The lead sheet, observed approximately 3 inches beneath the drain, was removed.

During process waste line removal, pipelines were evaluated to determine the condition of the pipeline. Table 4 summarizes the pipelines and their condition. Confirmation sampling analytical data are presented in Section 2.3.

Contaminated Soil

An approximately 4' x 4' x 4' section of subsurface lead-contaminated soil (Figure 6 and Photographs 16 and 17 in Appendix A) was excavated. An approximately 5' x 5' x 3' section of SVOC-contaminated soil (Figure 6) was excavated. Soil was packaged and will be shipped to Envirocare as low-level mixed waste (LLMW).

Table 4
Process Waste Line Summary

Pipeline Number	Composition	Leaks/Breaks	Approximate Depth (feet)	Type and Location of Seal	Photograph Number (Appendix A)
P-1 NPWL (1989)	Fiber Reinforced	No breaks, leaks, or staining	5	NA	14
P-1 OPWL (1972)	Stainless Steel	No breaks, leaks, or staining	5	NA	14
P-2 (1952)	Cast Iron	No breaks, leaks, or staining	4 to 6	Grouted with Sika Grout 212 at Manhole 2	7 and 15
P-2 pipe chases	Cast Metal	No breaks, leaks, or staining	0.5 to 1	NA	
Unanticipated P-2 pipeline found at Sample Locations BU39-0004 and Northern Process Line	Cast Iron	No breaks, leaks, or staining	5	Grouted with Sika Grout 212 at Manholes 3 and 4	NA

2.3 Confirmation Sampling

Confirmation sampling and analysis was conducted, after excavation and before backfilling, to verify accelerated action goals. Planned confirmation sampling locations were developed as part of the consultative process and are shown on Figure 9. Locations of collected confirmation samples are shown on Figure 10. Several confirmation sampling locations were changed because of the following:

- Pipeline was not found at that location; and
- Pipeline was found at locations not previously mapped.

Table 5 summarizes the analytes that were obtained from each sampling location. Only one location, BU38-0009, was sampled for organics. This location corresponds to the area where the RFCA Tier I SOR for SVOCs was greater than 1 in surface soil. Metals were analyzed at locations BU39-0006, -0007, -0008, -0012, and -0013 where lead concentrations were greater than RFCA Tier I ALs. Radionuclides were analyzed at all other locations associated with the process waste lines, sump, and source pit excavations.

Table 5
IHSS Group 100-4-Confirmation Sampling Specifications

IHSS Group	IHSS/PAC/UBC Site	Sampling Location	Easting	Northing	Media	Depth Interval (feet)	Analyte	Laboratory Method	Comments
100-4	UBC 123 – Radiological Health Physics Laboratory IHSS 100-148 – Waste Leaks	BU38-0002	2081729.02	749039.10	Subsurface Soil	8.0	Radionuclides	Alpha Spec	Manhole 2
		BU38-0003	2081656.21	749038.61	Subsurface Soil	7.0	Radionuclides	Alpha Spec	
		BU38-0004	2081652.69	749068.93	Subsurface Soil	5.0	Radionuclides	Gamma Spec Alpha Spec	
		BU38-0005	2081653.59	749089.94	Subsurface Soil	5.0	Radionuclides	Alpha Spec	Southwestern Sump
		BU38-0006	2081653.59	749103.45	Subsurface Soil	5.0	Radionuclides	Alpha Spec	Western Sump
		BU38-0007	2081653.59	749145.41	Subsurface Soil	5.0	Radionuclides	Alpha Spec	Northern Sump on Western Side
		BU38-0008	2081653.59	749124.00	Subsurface Soil	5.0	Radionuclides	Alpha Spec	West Process Line
		BU38-0009	2081608.1	749065.5	Subsurface Soil	2.0	SVOCs	8270	
		BU39-0001	2081695.58	749213.15	Surface Soil	0.0–0.5	Radionuclides	Alpha Spec	
		BU39-0003	2081642.68	749195.15	Subsurface Soil	2.0	Radionuclides	Alpha Spec	West Point Northern Pad Process Line
		BU39-0004	2081676.72	749194.75	Subsurface Soil	2.0	Radionuclides	Alpha Spec	Center Process Line on Northern Pad
		BU39-0005	2081682.58	749184.90	Subsurface Soil	2.0	Radionuclides	Alpha Spec	Southern Process Line on Northern Pad
		BU39-0006	2081698.67	749220.80	Subsurface Soil	4.0	Metals	6010	Lead Area Excavation Bottom Center
		BU39-0007	2081700.67	749218.80	Subsurface Soil	4.0	Metals	6010	Lead Area Excavation East Side Wall
		BU39-0008	2081696.67	749218.80	Subsurface Soil	4.0	Metals	6010	Lead Area Excavation South Side Wall
		BU39-0011	2081729.47	749164.49	Subsurface Soil	2.0	Radionuclides	Gamma Spec Alpha Spec	Northern Trench on Eastern Slab, West Side of Trench
		BU39-0012	2081696.67	749222.80	Subsurface Soil	4.0	Metals	6010	Lead Area Excavation West Side Wall

32
Closeout Report for IHSS Groups 100-4 and 100-5

IHSS Group	IHSS/PAC/UBC Site	Sampling Location	Easting	Northing	Media	Depth Interval (feet)	Analyte	Laboratory Method	Comments
		BU39-0013	2081731.33	749042.66	Subsurface Soil	4.0	Metals	6010	Lead Area Excavation North Side Wall
		BV39-0003	2081753.57	749164.40	Subsurface Soil	2.0	Radionuclides	Gamma Spec Alpha Spec	Northern Trench on East Slab, East Side of Trench
		Central pt. on S. PWL	2081676.505	749035.331	Subsurface Soil	5.0	Metals Radionuclides	6010 Alpha Spec	
		Eastern Process Line (BU38-0001)	2081730.80	749131.89	Subsurface Soil	5.0 (approximate)	Radionuclides	Alpha Spec	
		Northern Process Line	In-Process Sample	In-Process Sample	Subsurface Soil	0.0-1.5	Metals Radionuclides	6010 Alpha Spec	
		Source Pit (BU39-0002)	2081621.13 (estimated)	749189.52 (estimated)	Subsurface Soil	18.0	Metals Radionuclides	6010 Alpha Spec	
		Southeast Slab	2081748.236	749059.106	Concrete	0.0	Radionuclides	Gamma Spec	

Confirmation sampling results indicate that all contaminant concentrations are less than RFCA Tier II ALs. Results of the confirmation sampling are shown on Figure 11 and detailed in Table 6. Figure 11 and Table 6 present confirmation sampling results that are greater than background plus two standard deviations or MDLs along with RFCA Tier I and Tier II ALs for reference. Confirmation sampling contaminant concentrations were below the proposed Wildlife Refuge Worker (WRW) ALs. Residual lead concentrations were greater than the proposed ecological ALs. The complete data set is in Appendix B.

SOR calculations were based on the following list of contaminants of concern (COCs):

- Radionuclides (americium-241, plutonium-239/240, uranium-234, uranium-235, and uranium-238);
- Metals (arsenic, copper, mercury, lead); and
- Organics (SVOCs).

The COCs are based on characterization data that exceed background plus two standard deviations or MDLs. Metals and organics were grouped together for nonradionuclide SOR calculations. Plutonium, americium, and uranium were grouped together for radionuclide SOR calculations. Tier II SOR calculations for radionuclides and nonradionuclides are presented on Figures 12 and 13, respectively. As shown, all locations are less than the threshold value of 1. Table 7 lists the confirmation sampling RFCA Tier II SORs.

2.4 RCRA Unit Closure

During decommissioning the pipe chases and sumps in Rooms 156, 157, and 158, shown on Figure 14, were closed in accordance with the Closure Plan for Building 123 Components of RCRA Unit 40 (DOE 1997) but were not removed. Closure of the sump in Room 125 and the underground pipe from Room 158 did not meet the closure performance standards (RMRS 1998b) and were deferred to ER remediation. RCRA COCs at this location were metals and radionuclides.

RCRA closure accelerated action objectives were to remove all sumps and process waste lines associated with RCRA Unit 40, shown in Figure 14, within the IHSS Group 100-4 AOC. Sumps located in the former Rooms 156, 157, and 158 were removed along with more than 1 foot of soil around and beneath the sumps. Pipelines between former Rooms 156 and 157 sump locations and more than 1 foot of soil around and beneath the pipelines was excavated. Additionally, approximately 40 feet of associated 4-inch diameter stainless steel pipeline was excavated. Contamination was not detected on sumps or associated pipeline.

Confirmation samples were collected from the soil beneath each sump location, and one was collected in the pipeline trench between the Room 156 and 157 sump locations. Confirmation sampling locations are BU38-0002, BU38-0003, BU38-0004, BU38-0005, BU38-0006, BU38-0007, BU38-0008 and the Central Point of Southern PWL. Soil samples were analyzed for radionuclides only because they could be used as an indication of sump or pipeline leaks.

Table 6

Confirmation Sampling Results Greater Than Background Plus Two Standard Deviations or Method Detection Limits

IHSS Group	IHSS/PAC/UBC Site	Location Code	Analyte	Result (pCi/g)	Background Plus Two Standard Deviations (pCi/g)	Tier I AL (pCi/g)	Tier II AL (pCi/g)
100-4	UBC 123 – Radiological Health Physics Laboratory IHSS 100-148 – Waste Leaks	BU38-0002	Uranium-238	1.66	1.49	506.00	103.00
		BU38-0002	Uranium-238	1.66	1.49	506.00	103.00
		BU38-0004	Uranium-235	0.20	0.12	113.00	24.00
			Uranium-238	1.68	1.49	506.00	103.00
		BU38-0005	Americium-241	0.05	0.02	209.00	38.00
		BU39-0001	Uranium-238	3.03	1.49	506.00	103.00
		BU39-0004	Americium-241	0.08	0.02	209.00	38.00
		BU39-0011	Uranium-238	3.09	1.49	506.00	103.00
		BV39-0003	Uranium-235	0.30	0.12	113.00	24.00
			Uranium-235	0.23	0.12	113.00	24.00
			Uranium-238	3.70	1.49	506.00	103.00
			Uranium-238	5.06	1.49	506.00	103.00
		Central Point on Southern PWL	Uranium-238	1.55	1.49	506.00	103.00
		Eastern Process Line	Americium-241	0.13	0.02	209.00	38.00
			Plutonium-239/240	0.06	0.02	1,088.00	252.00
			Uranium-238	2.47	1.49	506.00	103.00
		Northern Process Line	Plutonium-239/240	0.11	0.02	1,088.00	252.00
			Uranium-235	0.15	0.12	113.00	24.00

Table 7
RFCA Tier II Sum of Ratios

Location	Tier II SOR Radionuclides	Tier II SOR Nonradionuclides
BU38-0002	0.13	NA
BU38-0003	0.01	NA
BU38-0004	0.14	NA
BU38-0005	0.01	NA
BU38-0006	0.01	NA
BU38-0007	0.00	NA
BU38-0008	0.00	NA
BU38-0009	NA	0.00
BU39-0001	0.15	NA
BU39-0003	0.13	NA
BU39-0004	0.13	NA
BU39-0005	0.12	NA
BU39-0006	NA	0.01
BU39-0007	NA	0.00
BU39-0008	NA	0.01
BU39-0012	NA	0.01
BU39-0013	NA	0.01
BV39-0001	0.13	NA
BV39-0003	0.18	NA
123 Emergency Southeastern Process Line	0.13	NA
123 Pad Soil Sample	0.12	NA
B123 Metal Manhole	0.12	NA
Source Well Pipe	0.13	NA
West of Manhole 2	0.01	NA
Central Point on Southern PWL	0.13	NA
Eastern Process Line	0.14	NA
Northern Process Line	0.13	NA
Source Pit	0.12	NA
Southeast Slab	0.13	NA

NA Not applicable because sample was not analyzed for specific constituents.

If elevated radionuclides were detected, additional analyses for metals could be required. As indicated in Table 6, americium-241 is slightly greater than background plus two standard deviations at one location, uranium-235 is slightly greater than background plus two standard deviations at one location, and uranium-238 is slightly greater than background plus two standard deviations in two locations. These data indicate that the sumps and pipelines had not leaked. Results for analytes greater than background plus two standard deviations are shown on Figure 11 and summarized in Table 6. The full data set is presented in Appendix B

RCRA Unit 40 process waste lines were excavated and removed from the sumps to MH-2. The remaining pipeline south of MH-2 to Valve Vault 18 could not be removed because of infrastructure constraints. The location of this pipeline is shown on Figure 15. The sump (waste pumping station), reported to be in Room 125, was not found. The following portions of RCRA Unit 40 were removed:

- Sumps in former Rooms 156, 157, and 158, and associated pipelines; and
- Process waste line from the sumps to MH-2.

2.5 Deviations from the ER RSOP

Deviations from the ER RSOP include the following:

- Actual confirmation sampling locations differed slightly from planned locations in most cases and several planned confirmation samples were not collected. A comparison of planned versus actual sampling locations is presented in Table 8.
- Several confirmation sampling locations were not measured but were hand plotted and estimated as noted on Table 5; and
- Process waste line removal stopped at the steamlines because of worker safety issues. Remaining NPWL and OPWL will be dispositioned with IHSS Group 000-4, PAC 000-504 and IHSS Group 000-2, IHSS 000-121 respectively.

Table 8
Planned Versus Actual Sampling Locations

Sampling Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Comments
BU38-0001	2081723.239	749136.392	2081730.80	749131.89	No significant change
BU38-0002	2081724.613	749036.094	2081729.02	749039.10	No significant change
BU38-0003	2081657.748	749031.973	2081656.21	749038.61	No significant change
BU38-0004	2081658.206	749063.573	2081652.69	749068.93	No significant change
BU38-0005	2081657.290	749093.800	2081653.59	749089.94	No significant change
BU38-0006	2081657.748	749105.249	2081653.59	749103.45	No significant change
BU38-0007	2081657.290	749146.925	2081653.59	749145.41	No significant change
BU38-0008	2081661.870	749125.400	2081653.59	749124.00	No significant change
BU38-0009	2081695.303	749218.828	2081608.1	749065.5	No significant change
BU38-0011	NA	NA	In-Process Sample	In-Process Sample	In process sample, not sampled

Sampling Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Comments
BU39-0001	2081623.858	749182.647	2081695.58	749213.15	No significant change
BU38-0010	2081757.588	749036.094	NA	NA	Not sampled, pipeline not found
BU39-0001	NA	NA	NA	NA	Waste sample
BU39-0002	2081633.934	749200.051	2081621.13 (estimated)	749189.52 (estimated)	No significant change
BU39-0003	2081647.215	749210.126	2081642.68	749195.15	No significant change
BU39-0004	2081670.572	749206.920	2081676.72	749194.75	No significant change
BU39-0005	2081679.731	749184.479	2081682.58	749184.90	No significant change
BU39-0006	2081697.593	749221.118	2081698.67	749220.80	No significant change
BU39-0007	2081699.882	749218.370	2081700.67	749218.80	No significant change
BU39-0008	2081695.303	749218.828	2081696.67	749218.80	No significant change
BU39-0009	2081699.424	749224.323	NA	NA	Same location as BU39-0013
BU39-0010	2081695.761	749224.323	NA	NA	Same Location as BU39-002
BU39-0011	2081722.781	749165.244	2081729.47	749164.49	No significant change
BU39-0012	2081785.066	749036.552	2081696.67	749222.80	No significant change
BU39-0013	2081757.588	749036.094	2081731.33	749042.66	No significant change
BV39-0003	2081754.382	749166.160	2081753.57	749164.40	No significant change
BV38-0001	2081784.608	749079.144	NA	NA	Not sampled, pipeline not removed
BV38-0002	2081785.066	749036.552	NA	NA	Not sampled, pipeline not removed
BV38-0004	NA	NA	NA	NA	Waste sample
BV39-0001	2081752.092	749210.584	NA	NA	Waste sample
BV39-0002	2081746.138	749195.471	NA	NA	Not sampled, sump not found
Central point on Southern. PWL	NA	NA	2081676.505	749035.331	Sampled, but not planned
Northern Process Line	NA	NA	In-Process Sample	In-Process Sample	In Process Sample
Southeast Slab	NA	NA	2081748.236	749059.106	Concrete sampled instead of soil at BV38-0004

2.6 Waste Management

Waste from the IHSS Group 100-4 accelerated action consisted of concrete, asphalt, soil, and pipeline. Clean concrete was segregated and recycled in accordance with the RSOP for Recycling Concrete (DOE 1999a). Contaminated concrete was loaded into metal waste boxes for disposal as LLW. Pipeline was placed in metal waste containers for disposal as low-level mixed waste (LLMW) along with the lead liner found inside the concrete. In addition, two 10-foot sections of steam piping with asbestos-containing insulation were removed and packaged, and removed from the Site by an asbestos abatement contractor. Asphalt was removed for disposal as sanitary waste. More than 2,484, pounds (lbs) of sanitary waste, 25,620 lbs of LLW, 120,026 lbs of LLMW, and 15 lbs of asbestos-containing material (ACM) was generated during this accelerated action. Waste types, volumes, and disposition are presented in Table 9.

Table 9
Waste Characterization Summary

Container Number	Extended Number	Container Type	Volume (cu.ft.)	Waste Type	Gross Weight (lbs.)	Status	Notes	IDC	Waste Codes	Disposition
B02192	123P-00020	CAB	96	LLMW	6,420	Full and sealed	Soil from beneath room 105	324	D008	Transported to 904 Pad 5/30/02; will be shipped to Envirocare
B02193	123P-00015	CAB	96	LLMW	4,120	Full and sealed	Process waste piping, with lead	324/5001	D008	Transported to 904 Pad 5/30/02; will be shipped to Envirocare
B02228	123P-00019	CAB	96	LLMW	4,080	Full and sealed	Process waste pipe, with lead	324/5001	D008	Transported to 904 Pad 5/30/02; will be shipped to Envirocare
B02229	123P-00016	CAB	96	LLMW	3,340	Full and sealed	Process waste pipe, with lead	324/5001	D008	Transported to 904 Pad 5/30/02; will be shipped to Envirocare
B02188	123P-00023	CAB	96	LLMW	7,660	Full and sealed	Soil from beneath room 105	324	D008	Transported to 904 Pad 5/30/02; will be shipped to Envirocare
B02189	123P-00008	CAB	96	LLW	2,920	Foamed and sealed	Concrete from room 109	5001/323	NA	Transported to 904 Pad 5/30/02; will be shipped to NTS
B02190	123P-00009	CAB	96	LLW	4,540	Foamed and sealed	Concrete from room 125	5001/323	NA	Transported to 904 Pad 5/30/02; will be shipped to NTS
B02191	123P-00010	CAB	96	LLW	3,480	Foamed and sealed	Concrete from room 109	5001/323	NA	Transported to 904 Pad 5/30/02; will be shipped to NTS
B02194	123P-00011	CAB	96	LLW	3,480	Foamed and sealed	Concrete and metal, from room 109	5001/323	NA	Transported to 904 Pad 5/30/02; will be shipped to NTS
B02195	123P-00012	CAB	96	LLW	3,020	Foamed and sealed	Concrete and metal, room 125	5001/323	NA	Transported to 904 Pad 5/30/02; will be shipped to NTS
B02196	123P-00013	CAB	96	LLW	3,820	Foamed and sealed	Crushed concrete and metal from room 109	5001/323	NA	Transported to 904 Pad 5/30/02; will be shipped to NTS
B02197	123P-00014	CAB	96	LLW	1,240	Full and sealed	Crushed concrete	5001	NA	Transported to 904 Pad 5/30/02; will be shipped to NTS
B02230	123P-00017	CAB	96	LLW	5,600	Full and sealed	Soil	323	NA	Transported to 904 Pad 5/30/02; will be shipped to NTS
X29337	123P-00037	ST Cargo	1,280	LLW	29,580	In process, sampled for	Concrete vault, piping; load for shipment to NTS	323/5001	NA	Shipped to NTS 6/4/02

Closeout Report for IHSS Groups 100-4 and 100-5

Container Number	Extended Number	Container Type	Volume (cu.ft.)	Waste Type	Gross Weight (lbs.)	Status	Notes	IDC	Waste Codes	Disposition
						hazardous constituents	5/22/02			
X29522	123P-00022	ST Cargo	1,280	LLW	4,386	Foamed and sealed	NCR for hole in side of cargo, 2 concrete vaults, plastic, Styrofoam	323/5001	NA	Awaiting NTS profile modification and approval prior to shipment
X29537	123P-00021	ST Cargo	1,280	LLW	34,740	Foamed and sealed	Concrete vault and piping	323/5001	NA	Awaiting NTS profile modification and approval prior to shipment
L00857	123P-00025	Lift Liner	258	LLW	6,480	Sealed	Concrete rubble	323/5001	NA	Awaiting NTS profile modification and approval prior to shipment
L00858	123P-00026	Lift Liner	258	LLW	16,740	Sealed	Concrete rubble	323/5001	NA	Awaiting NTS profile modification and approval prior to shipment
X29848	NA	Bag	90	ACM	15	Full	Dispositioned in B779 Roll-off		NA	Dispositioned with B779 ACM wastes
47	123 Recycle	End dumps	18,898	Sanitary	1,984,244	Full	Concrete	NA	NA	Recycled onsite
20	20809	R23	636	Sanitary	unknown	Full	Metal Debris—Consists of electrical conduit, rebar with small amounts of concrete, and electrical wire	0323	NA	Shipped to Front Range Landfill
21	20809	R23	636	Sanitary	55,613	Full	Debris—consists of electric conduit, rebar with small amounts of concrete, electrical wire, asphalt (123 pad & 121 pad), and wood chip board.	0323	NA	Shipped to Front Range Landfill
22	20809	R23	636	Sanitary	55,613	Full	Asphalt	0323	NA	Shipped to Front Range Landfill
25	30340	R23	636	Sanitary	55,613	Full	Asphalt	0323	NA	Shipped to Front Range Landfill

45
Closeout Report for IHSS Groups 100-4 and 100-5

Container Number	Extended Number	Container Type	Volume (cu.ft.)	Waste Type	Gross Weight (lbs.)	Status	Notes	IDC	Waste Codes	Disposition
26	30340	R23	636	Sanitary	55,613	Full	Asphalt	0323	NA	Shipped to Front Range Landfill
27	20809	R23	636	Sanitary	55,613	Full	Asphalt	0323	NA	Shipped to Front Range Landfill
28	30340	R23	636	Sanitary	55,613	Full	Asphalt	0323	NA	Shipped to Front Range Landfill
29	20809	R23	636	Sanitary	55,613	Full	Asphalt	0323	NA	Shipped to Front Range Landfill
30	30340	R23	636	Sanitary	55,613	Full	Asphalt and plastic	0323	NA	Shipped to Front Range Landfill
31	20809	R23	636	Sanitary	55,613	Full	Asphalt	0323	NA	Shipped to Front Range Landfill
32	NA	End Dump	1,942	Sanitary	Unknown	Full	Asphalt, electrical conduit and rebar with concrete; no container number (used end dump #9); probably represents several loads.	0323	NA	Shipped to Front Range Landfill

CAB cost advantage box

Excavated soil was temporarily stockpiled near the excavations (Figure 8). Samples were collected from the soil stockpiles to determine the final disposition of the excavated soil. Because analytical results from soil stockpile samples did not exceed RFCA Tier II subsurface soil ALs (Table 10), this soil was placed back into the excavations.

2.7 Site Reclamation

All excavated areas were backfilled and revegetated after confirmation sampling results were received and discussed with regulatory agencies through the consultative process. Excavated soil with radionuclide concentrations less than RFCA Tier II ALs was used as backfill in the trench that it was removed from. Additionally, 32 end-dump loads of topsoil from offsite sources were used to bring excavated areas up to grade.

The IHSS Group 100-4 area was rough graded before the topsoil was distributed over the site. The topsoil was graded, then scarified, and a seed mix consisting of Canada bluegrass was spread over the site using broadcast seeding methods. Hydromulch was applied to conserve moisture and prevent seed erosion.

2.8 Accelerated Action Goals

ER RSOP Notification #02-01 accelerated action project objectives were achieved through the following:

- Removal of the concrete slab and associated structures;
- Removal of below-grade sumps and process waste lines to MH-1; and
- Removal of all soil with contaminant concentrations greater than RFCA Tier I ALs.

Removal activities were consistent with and contributed to the ER RSOP overall long-term remedial action objectives (RAOs) for RFETS soil. This contribution is described below.

RAO 1: Provide a remedy consistent with the RFETS goal of protection of human health and the environment. Removal of the UBC 123 slab, all structures and pipelines to MH-1, all soil with contaminant concentrations greater than RFCA Tier I ALs contributed to the protection of human health and the environment because potential sources of contamination were removed.

RAO 2: Provide a remedy that minimizes the need for long-term maintenance and institutional or engineering controls. Removal of the UBC 123 slab, all structures and pipelines to MH-1, and all soil with contaminant concentrations greater than RFCA Tier I ALs minimizes the need for long-term maintenance and institutional or engineering controls because potential sources of contamination were removed.

RAO 3: Minimize the spread of contaminants during implementation of accelerated actions. Best management practices were used to prevent the spread of contaminants during the accelerated action. Air monitoring data during the accelerated action did not indicate any exceedances.

Table 10
Waste Characterization Data Summary--Detected Analytes

Matrix Type	Analyte	Maximum	Number Samples	Detection Frequency %	Tier I AL	Tier II AL	Units
Concrete	Americium-241	0.05	3	100	NA	NA	pCi/g
Concrete	Curium	0.13	3	100	NA	NA	pCi/g
Concrete	Uranium-234	1.36	3	100	NA	NA	pCi/g
Concrete	Uranium-235	0.16	3	100	113	24	pCi/g
Concrete	Uranium-238	1.09	3	100	NA	NA	pCi/g
Concrete	Actinium	1.34	3	100	NA	NA	pCi/g
Concrete	Antimony-125	0.01	3	100	NA	NA	pCi/g
Concrete	Cerium-144	0.02	3	100	NA	NA	pCi/g
Concrete	Cesium-137	8.68	3	100	NA	NA	pCi/g
Concrete	Cobalt-60	0.02	3	100	NA	NA	pCi/g
Concrete	Europium-152	0.03	3	100	NA	NA	pCi/g
Concrete	Europium-154	-0.01	3	100	NA	NA	pCi/g
Concrete	Europium-155	0.03	3	100	NA	NA	pCi/g
Concrete	Lead	1.41	3	100	NA	NA	pCi/g
Concrete	Potassium	38.70	3	100	NA	NA	pCi/g
Concrete	Promethium	0.00	3	100	NA	NA	pCi/g
Concrete	Promethium-146	0.0204	3	100	NA	NA	pCi/g
Concrete	Ruthenium-106	0.05	3	100	NA	NA	pCi/g
Concrete	Thorium-234	1.27	3	100	NA	NA	pCi/g
Concrete	Uranium-235	0.17	3	33	NA	NA	pCi/g
Concrete	Uranium-238	1.27	3	100	NA	NA	pCi/g
Concrete	Yttrium-88	0.0108	3	100	NA	NA	pCi/g
Pipe Scale	2-Butanone	8.6	1	100	NA	NA	µg/kg
Pipe Scale	2-Ethyl-1-hexanol	85	1	100	NA	NA	µg/kg
Pipe Scale	4-Isopropyltoluene	2.6	1	100	NA	NA	µg/kg
Pipe Scale	Acetone	25	1	100	27,200,000	272,000	µg/kg
Pipe Scale	Benzene 1,2,3,5-tetramethyl	9.9	1	100	NA	NA	µg/kg
Pipe Scale	Benzene 1,2,4-trimethyl	2	1	100	NA	NA	µg/kg
Pipe Scale	Ethylbenzene	1.9	1	100	932,000	9,320	µg/kg
Pipe Scale	Hexanol	12	1	100	NA	NA	µg/kg
Pipe Scale	Methylene chloride	1.6	1	100	578	5.78	µg/kg
Pipe Scale	Naphthalene	8.8	1	100	10,100,000	101,000	µg/kg
Pipe Scale	Styrene	3	1	100	274,000	2,740	µg/kg
Pipe Scale	Toluene	4.4	1	100	707,000	7,070	µg/kg
Pipe Scale	Xylenes (total)	18	1	100	9,740,000	97,400	µg/kg
Waste Soil	4-Nitrophenol	140.00	1	100	NA	NA	µg/kg
Waste Soil	Methylene chloride	2.50	1	100	578	5.78	µg/kg
Waste Soil	Pyrene	62.00	1	100	397,000,000	3,970,000	µg/kg
Waste Soil	Actinium	2.01	30	100	NA	NA	pCi/g
Waste Soil	Americium-241	4.43	29	15	209	38	pCi/g
Waste Soil	Uranium-234	1.00	13	100	1,627	307	pCi/g
Waste Soil	Uranium-235	0.31	29	17	113	24	pCi/g
Waste Soil	Uranium-238	3.46	29	100	506	103	pCi/g
Waste Soil	Actinium-228	2.01	29	100	NA	NA	pCi/g

Matrix Type	Analyte	Maximum	Number Samples	Detection Frequency %	Tier I AL	Tier II AL	Units
Waste Soil	Americium-241	4.43	28	100	209	38	pCi/g
Waste Soil	Bismuth-212	2.21	29	100	NA	NA	pCi/g
Waste Soil	Bismuth-214	0.866	29	100	NA	NA	pCi/g
Waste Soil	Cesium-134	0.00	26	100	NA	NA	pCi/g
Waste Soil	Potassium-40	26.5	29	100	NA	NA	pCi/g
Waste Soil	Lead-212	1.86	29	100	NA	NA	pCi/g
Waste Soil	Lead-214	1.01	29	100	NA	NA	pCi/g
Waste Soil	Polonium-210	6,820.00	29	100	NA	NA	pCi/g
Waste Soil	Radium bromide	3.71	29	100	NA	NA	pCi/g
Waste Soil	Thalium-208	0.577	29	100	NA	NA	pCi/g
Waste Soil	Uranium-235	0.31	27	100	113	24	pCi/g
Waste Soil	Uranium-238	3.46	28	100	506	103	pCi/g

2.9 No Longer Representative Sampling Locations

The map and listing of NLR sampling locations is shown in Table 11 and on Figure 16.

Table 11
No Longer Representative Sampling Locations

B123 D&D Project Sampling Locations		UBC 123 HDD Project Sampling Locations		
2	33-11	GP-1-1	GP3-7	HDD-3-05
5	34-12	GP-1-2	GP3-9	HDD-4-01
10	35-13	GP-1-3	GP-4-4	HDD-4-02
11	36-14	GP-1-4	GP-4-6	HDD-4-03
14	37-15	GP-2-3	HDD-2-01	HDD-4-4
23-1	38-16	GP-2-4	HDD-2-02	HDD-4-06
24-2	39-17	GP-2-6	HDD-2-03	LAB1
25-3	40-18	GP-2-8	HDD-2-04	LAB2
26-4	42-20	GP-2-10	HDD-2-05	SP1
27-5	44-22	GP-2-11	HDD-2-06	SP2
28-6	45-23	GP-2-13	HDD-2-07	SP3
29-7	46-25	GP3-2	HDD-2-08	SP4
30-8	47-25	GP-3-4	HDD-3-02	WPS-2
31-9	48-26	HDD-4-05	HDD-3-03	WPS-3
32-10			HDD-3-04	WPS-4

HDD Horizontal Directional Drilling
D&D Deactivation and Decommissioning

3.0 POST-REMEDIATION CONDITIONS

Post remediation conditions for each IHSS, PAC, and UBC at IHSS Group 100-4 are described below.

3.1.1 UBC 123, Radiological Health Physics Laboratory

Building 123 slab, footers, source pit, and manholes were excavated and packaged for disposal or if appropriate, recycled in accordance with the RSOP for Recycling Concrete (DOE 1999a). Sumps and process waste lines were excavated and packaged for disposal. Confirmation sampling results from the soil beneath the slab, footers, source pit, manholes, sumps and process waste lines indicated that all contaminant concentrations were less than RFCA Tier II ALs and proposed WRW ALs.

3.1.2 IHSS 100-148, Waste Leaks

Sumps and process waste lines within IHSS 100-148 were excavated and packaged for disposal. Confirmation sampling results from the soil beneath the sumps and process waste lines indicated that all contaminant concentrations were less than RFCA Tier II ALs and proposed WRW ALs.

3.1.3 PAC 100-603, Bioassay Waste Spill

PAC 100-603 was approved as a No Further Action (NFA) site in 2002. A description of this PAC is contained in the Annual Update for the Historical Release Report (DOE 2001c).

3.1.4 PAC 100-611, Building 123 Scrubber Solution Spill

Five surface soil samples were collected and analyzed for pH at PAC 100-611. Sampling results indicated that remediation was not required.

3.1.5 Residual Contamination

Residual contaminant concentrations greater than background plus two standard deviations or MDLs, consisting of confirmation sampling locations, backfill, and pre-accelerated action sampling locations that were not remediated, at IHSS Group 100-4 are presented on Table 12 and shown on Figure 17. Figure 17 also presents the surface and subsurface soil AOCs and RFCA Tier II exceedances. Table 13 presents the survey data, depth, and additional soil cover information for locations with residual contamination.

Pipelines that were not removed during the accelerated action are shown on Figure 18. The pipeline extending east and then north from MH-3 was not removed. This cast iron pipeline, part of P-2, is approximately 5 feet below the surface. The pipeline end was sealed with Sika Grout 212. The pipeline extending south from MH-2 was not removed. This cast iron pipeline, part of P-1, is approximately 5 feet below the surface. The pipeline end was sealed with Sika Grout 212. This pipeline extends through PAC 100-602 to Valve Vault 18.

Additional removal actions beyond ER RSOP Notification #IA-02-01 accelerated action goals (DOE 2002b) were not required at IHSS 100-4 because of the following:

- Residual radionuclide activities in subsurface soil were less than RFCA Tier II ALs, proposed WRW ALs, and only slightly greater than background plus two standard deviations

Table 12
Residual Contamination at IHSS Group 100-4

Location	Analyte	Media	Residual Concentration	Units	Background Plus Two Standard Deviations	MDL
BU38-0005	Americium-241	Subsurface Soil	0.05	pCi/g	0.02	NA
BU39-0004	Americium-241	Subsurface Soil	0.08	pCi/g	0.02	NA
Eastern Process Line	Americium-241	Subsurface Soil	0.13	pCi/g	0.02	NA
Eastern Process Line	Plutonium-239/24	Subsurface Soil	0.06	pCi/g	0.02	NA
Northern Process Line	Plutonium-239/24	Subsurface Soil	0.11	pCi/g	0.02	NA
SS306893	Americium-241	Surface Soil	0.03	pCi/g	0.02	NA
SS306793	Americium-241	Surface Soil	0.12	pCi/g	0.02	NA
	Beryllium	Surface Soil	1.20	mg/kg	0.97	NA
	Cobalt	Surface Soil	28.70	mg/kg	10.91	NA
SS307093	Americium-241	Surface Soil	0.03	pCi/g	0.02	NA
	Copper	Surface Soil	25.10	mg/kg	18.06	NA
	Lead	Surface Soil	152.00	mg/kg	54.62	NA
	Plutonium-239/240	Surface Soil	0.16	pCi/g	0.02	NA
	Zinc	Surface Soil	113.00	mg/kg	73.76	NA
SS307293	Cobalt	Surface Soil	11.30	mg/kg	10.91	NA
	Americium-241	Surface Soil	0.05	pCi/g	0.02	NA
SS307393	Americium-241	Surface Soil	0.03	pCi/g	0.02	NA
	Copper	Surface Soil	22.70	mg/kg	18.06	NA
	Lead	Surface Soil	128.00	mg/kg	54.62	NA
	Plutonium-239/240	Surface Soil	0.17	pCi/g	0.02	NA
	Zinc	Surface Soil	134.00	mg/kg	73.76	NA
SS307593	Americium-241	Surface Soil	0.02	pCi/g	0.02	NA
	Lead	Surface Soil	165.00	mg/kg	54.62	NA
	Zinc	Surface Soil	85.50	mg/kg	73.76	NA
SS307693	Americium-241	Surface Soil	0.19	pCi/g	0.02	NA
	Barium	Surface Soil	203.00	mg/kg	141.26	NA
	Copper	Surface Soil	19.80	mg/kg	18.06	NA
	Strontium	Surface Soil	94.70	mg/kg	48.94	NA
	Uranium-238	Surface Soil	2.14	pCi/g	2.00	NA
	Zinc	Surface Soil	133.00	mg/kg	73.76	NA

Location	Analyte	Media	Residual Concentration	Units	Background Plus Two Standard Deviations	MDL
HDD-2-07	Acetone	Subsurface Soil	23	µg/kg	NA	13
	Methylene Chloride	Subsurface Soil	25	µg/kg	NA	6
	bis(2-Ethylhexyl)phthalate	Subsurface Soil	1200	µg/kg	NA	340
	Copper, Total	Subsurface Soil	182	µg/kg	38.21	0.10
1	Methylene Chloride	Subsurface Soil	7.00	µg/kg	NA	6
11	Acetone	Subsurface Soil	30.00	µg/kg	NA	13
	Napthalene	Subsurface Soil	13.00	µg/kg	NA	11
12	1,2,4-Trichlorobenzene	Subsurface Soil	6.00	µg/kg	NA	5
	Acetone	Subsurface Soil	69.00	µg/kg	NA	5
	Bis(2-Ethylhexyl)phthalate	Subsurface Soil	50.00	µg/kg	NA	10
	Methylene Chloride	Subsurface Soil	34.00	µg/kg	NA	5
	Napthalene	Subsurface Soil	13.00	µg/kg	NA	11
	Uranium-235	Subsurface Soil	0.20	pCi/g	0.12	NA
13	Carbon Tetrachloride	Subsurface Soil	11.00	µg/kg	NA	6
	Methylene Chloride	Subsurface Soil	34.00	µg/kg	NA	5
	Napthalene	Subsurface Soil	16.00	µg/kg	NA	11
16	Acetone	Subsurface Soil	6.00	µg/kg	NA	5
	Benzo(a)pyrene	Subsurface Soil	760.00	µg/kg	NA	730
	Fluoranthene	Subsurface Soil	1500.00	µg/kg	NA	730
	Pyrene	Subsurface Soil	1300.00	µg/kg	NA	730
17	Acetone	Subsurface Soil	8.00	µg/kg	NA	6
	Plutonium-239/240	Subsurface Soil	0.03	pCi/g	0.02	NA
18	Acetone	Subsurface Soil	18.00	µg/kg	NA	5
	Fluoranthene	Subsurface Soil	1200.00	µg/kg	NA	710
	Napthalene	Subsurface Soil	10.00	µg/kg	NA	5
	Plutonium-239/240	Subsurface Soil	0.09	pCi/g	0.02	NA
	Pyrene	Subsurface Soil	1100.00	µg/kg	NA	710
19	Napthalene	Subsurface Soil	10.00	µg/kg	NA	5
20	Acetone	Subsurface Soil	99.00	µg/kg	NA	6
21	Plutonium-239/240	Subsurface Soil	0.13	pCi/g	0.02	NA
22	Americium-241	Subsurface Soil	0.10	pCi/g	0.02	NA
3	Americium-241	Subsurface Soil	0.10	pCi/g	0.02	NA

Location	Analyte	Media	Residual Concentration	Units	Background Plus Two Standard Deviations	MDL
	Fluoranthene	Subsurface Soil	410.00	µg/kg	NA	360
	Pyrene	Subsurface Soil	420.00	µg/kg	NA	360
4	Fluoranthene	Subsurface Soil	480.00	µg/kg	NA	350
	Pyrene	Subsurface Soil	540.00	µg/kg	NA	350
8	Fluoranthene	Subsurface Soil	810.00	µg/kg	NA	370
	Pyrene	Subsurface Soil	740.00	µg/kg	NA	370
02E0022-002	Uranium-235	Subsurface Soil	0.11	pCi/g	0.09	NA
02E0008-014	Americium-241	Subsurface Soil	0.04	pCi/g	0.02	0.03
02E0008-017	Americium-241	Subsurface Soil	0.06	pCi/g	0.02	0.06
02E0010-007	Americium-241	Subsurface Soil	0.07	pCi/g	0.02	0.06
02E0022-003	Uranium-235	Subsurface Soil	0.15	pCi/g	0.09	NA
02E0022-003	Uranium-238	Subsurface Soil	2.14	pCi/g	2.00	NA

Table 13
Residual Contamination Location Information

Location	Easting	Northing	Depth (ft)	Additional Cover
SS306893	2081750.00	749027.00	Surface Soil	Covered with approximately 5 inches of topsoil, revegetated
SS306793	2081660.00	749013.00	Surface Soil	Covered with approximately 5 inches of topsoil, revegetated
SS307093	2081780.00	749093.00	Surface Soil	NA
SS307293	2081690.00	749165.00	Surface Soil	Covered with approximately 5 inches of topsoil, revegetated
SS307393	2081780.00	749158.00	Surface Soil	Covered with approximately 5 inches of topsoil, revegetated
SS307593	2081680.00	749261.00	Surface Soil	NA
SS307693	2081770.00	749260.00	Surface Soil	NA
SS307693	2081770.00	749260.00	Surface Soil	NA
HDD-2-07	2081727.77	749133.00	5.2	Covered with approximately 5 inches of topsoil, revegetated
1	2081785.70	749247.70	0.0-6.0	NA
11	2081663.90	749050.30	0.0-6.0	Covered with approximately 5 inches of topsoil, revegetated
12	2081682.40	748994.60	0.0-6.0	NA
13	2081682.40	749082.10	0.0-6.0	Covered with approximately 5 inches of topsoil, revegetated
16	2081605.60	749165.00	0.0-6.0	NA
17	2081607.40	749199.60	0.0-6.0	NA
18	2081688.20	749232.30	0.0-6.0	NA
19	2081725.50	749231.40	0.0-6.0	Covered with approximately 5 inches of topsoil, revegetated
20	2081713.00	749117.40	0.0-6.0	Covered with approximately 5 inches of topsoil, revegetated
21	2081682.70	749127.20	0.0-6.0	Covered with approximately 5 inches of topsoil, revegetated
22	2081608.60	749004.00	0.0-6.0	NA
3	2081800.20	749126.30	0.0-6.0	NA
4	2081784.50	749146.50	0.0-6.0	NA
8	2081776.90	749101.30	0.0-6.0	NA
HDD-2-01	2081726.65	749224.34	3.9	Covered with approximately 5 inches of topsoil, revegetated
BU38-0005	2081653.00	749090.00	2.5 - 4.5	Covered with approximately 5 inches of topsoil, revegetated.
BU39-0004	2081677.00	749195.00	2.5 - 4.5	Covered with approximately 5 inches of topsoil, revegetated
Eastern Process Line	2081731.00	749132.00	2.5 - 4.5	Covered with approximately 5 inches of topsoil, revegetated
Northern Process Line	2081664.00	749196.00	2.5 - 4.5	Covered with approximately 5 inches of topsoil, revegetated

- Residual lead concentrations in subsurface soil were less than Tier II ALs, proposed WRW ALS, and only slightly greater than background plus two standard deviations. Residual lead concentrations are slightly greater than proposed ecological ALs.
- Residual SVOC concentrations were less than Tier II ALs, proposed WRW ALs, and only slightly greater than MDLs, and the Tier II SOR was less than 1.
- Radionuclide activities in surface soil were less than Tier II ALs, proposed WRW ALs, and only slightly greater than background plus two standard deviations (DOE 2002b).
- Beryllium was detected at 0.16 mg/kg greater than the RFCA Tier II AL in surface soil at only one location outside of UBC 123, IHSS 148, and PAC 100-611 but within the AOC. This result was less than the MDL. Additionally, this location was covered with approximately 6 inches of soil and revegetated.
- Methylene chloride concentrations in subsurface soil, outside of UBC 123, IHSS 148, and PAC 100-611 but within the AOC, were greater than the RFCA Tier II AL at six locations. Methylene chloride was found in laboratory blanks associated with the data set and the results are likely due to laboratory contamination. Methylene chloride does not pose a significant risk at these concentrations.

4.0 STEWARDSHIP EVALUATION

The IHSS Group 100-4 stewardship evaluation was conducted through ongoing consultation with the regulatory agencies. Frequent informal project updates, e-mails, telephone and personal contact occurred throughout the project. Documentation associated with these contacts is provided in Appendix C.

4.1 Current Site Conditions

As discussed in Section 2.0, the accelerated action at IHSS Group 100-4 consisted of removal of slabs, footers, and utilities, and soil with metal contaminant concentrations greater than Tier I ALs. Section 3.0 presents residual contamination information.

The following conditions currently exist at IHSS Group 100-4:

- Potential sources of contamination that existed at IHSS Group 100-4 (building slab, source pits, process waste lines, and sumps) were removed.
- Residual radionuclide activities in subsurface soil are slightly greater than background plus two standard deviations.
- Residual lead concentrations in subsurface soil are slightly greater than background plus two standard deviations.
- Residual SVOC concentrations are slightly greater than MDLs, and the Tier II SOR is less than 1.
- Radionuclide activities in surface soil are slightly greater than background plus two standard deviations (DOE 2002b).

- Beryllium was detected at 0.16 mg/kg greater than the RFCA Tier II AL in surface soil at only one location outside of UBC 123, IHSS 148, and PAC 100-611 but within the AOC. This result was less than the MDL. Additionally, this location was covered with approximately 6 inches of soil and revegetated.
- Methylene chloride concentrations in subsurface soil, outside of UBC 123, IHSS 148, and PAC 100-611 but within the AOC, are greater than the RFCA Tier II AL but less than proposed WRR and ecological ALs at six locations. Methylene chloride was found in laboratory blanks associated with the data set and the results are likely due to laboratory contamination. Methylene chloride does not pose a significant risk at these concentrations.
- The pipeline extending east and then north from MH-3 was not removed. This cast iron pipeline, part of P-2, is approximately 5 feet below the surface. The pipeline end was sealed with Sika Grout 212. The pipeline extending south from MH-2 was not removed. This cast iron pipeline, part of P-1, is approximately 5 feet below the surface. The pipeline end was sealed with Sika Grout 212. This pipeline extends through PAC 100-602 to Valve Vault 18.
- The site was covered with approximately 6 inches of clean soil and regraded.
- The site was revegetated.

4.2 Near Term Management Recommendations

Because residual contaminant concentrations are low and potential contaminant sources were removed, mitigated or found not to have existed, no specific near-term management techniques are required. Potential contaminant sources and pathways have been removed. Contaminant concentrations in soil remaining at IHSS Group 100-4 do not trigger any further accelerated action. Excavation at the site will continue to be controlled through the Site Soil Disturbance Permit process. Fencing and signs restricting access will be posted to minimize disturbance to newly-revegetated areas. Site access and security controls and the Soil Disturbance Permit process will remain in place pending implementation of long-term controls.

4.3 Long-Term Stewardship Recommendations

Based on remaining environmental conditions at IHSS Group 100-4, no specific long-term stewardship activities are recommended for IHSS Group 100-4 beyond the generally applicable Site requirements that may be imposed on this area in the future, which are dependent upon the final remedy selected. Institutional controls that will be used as appropriate for this area include the following:

- Prohibitions on construction of buildings in the IA;
- Restrictions on excavation or other soil disturbance; and
- Prohibitions on groundwater pumping in the area of IHSS Group 100-4.

No specific engineered controls are recommended as a result of the conditions remaining in IHSS Group 100-4; and

No specific environmental monitoring is recommended as a result of the environmental conditions remaining in IHSS Group 100-4.

No specific institutional or physical controls, such as fences, are recommended as a result of the environmental conditions remaining in IHSS Group 100-4.

This closeout report and associated documentation will be retained as part of the Rocky Flats administrative record file. These specific long-term stewardship recommendations will also be summarized in the Rocky Flats *Long-Term Stewardship Strategy*.

IHSS Group 100-4 will be evaluated as part of the Sitewide CRA, which is part of the RFI/RI and Corrective Measures Study/Feasibility Study (CMS/FS) that will be conducted for the Site. The need for and extent of any, more general, long-term stewardship activities will also be analyzed in RFI/RI and CMS/FS and will be proposed as part of the preferred alternative in the Proposed Plan for the Site. Institutional controls and other long-term stewardship requirements for Rocky Flats will ultimately be contained in the Corrective Action Decision/Record of Decision (CAD/ROD), in any post-closure Colorado Hazardous Waste Act permit that may be required, and in any post-RFCA agreement.

4.4 Accelerated Action Stewardship

Stewardship actions that were implemented during the accelerated action included posting signs and barriers, including yellow chain and jersey barriers.

5.0 DATA QUALITY ASSESSMENT

The DQOs for this project, as defined in the IASAP (DOE 2001a), were achieved based on the DQA provided in the following sections. The DQO/DQA process ensures that the type, quantity, and quality of environmental data used in decision making are defensible, with emphasis on attaining adequate (statistical) confidence in the decisions. The DQO/DQA process is based on the following guidance and requirements:

- EPA QA/G-4, 1994. Guidance for the Data Quality Objective Process (EPA 1994a);
- EPA QA/G-9, 1998. Guidance for the Data Quality Assessment Process; Practical Methods for Data Analysis (EPA 1998); and
- DOE Order 414.1A, Quality Assurance (DOE 1999b)

Verification and validation (V&V) of the data are the primary components of the DQA. The final data are compared with original project DQOs and evaluated with respect to project decisions; uncertainty within the decisions; and quality criteria required for the data, specifically precision, accuracy, representativeness, completeness, comparability, and sensitivity (PARCCS). Validation criteria are consistent with the following RFETS-specific documents and industry guidelines:

- EPA 540/R-94/012, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (EPA 1994b);
- EPA 540/R-94/013, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (EPA 1994c); and
- Kaiser-Hill Company, L.L.C.(K-H) V&V Guidelines
 - General Guidelines for Data Verification and Validation, DA-GR01-v1, December 3, 1997
 - V&V Guidelines for Isotopic Determinations by Alpha Spectrometry, DA-RC01-v1, 2/13/98

- V&V Guidelines for Volatile Organics, DA-SS01-v1, 12/3/97
 - V&V Guidelines for Semivolatile Organics, DA-SS02-v1, 12/3/97
 - V&V Guidelines for Metals, DA-SS05-v1, 12/18/97
- Lockheed-Martin, 1997, Evaluation of Radiochemical Data Usability, ES/ER/MS-5.

This report will be submitted to the Comprehensive Environmental, Response, Compensation and Liability Act (CERCLA) Administrative Record (AR) for permanent storage within 30 days of approval by CDPHE and/or the U.S. Environmental Protection Agency (EPA).

5.1 DQO Decisions

Consistent with the original DQO decision rules of the project, SOR calculations were conducted for each sample location using confirmation results. In accordance with the DQOs, if the SOR for radiological or nonradiological constituents does not exceed 1 then no further action is required. As shown in Section 2.3, SORs were below 1 and no further action is required.

5.2 Verification and Validation of Results

Verification ensures that data produced and used by the project are documented and traceable in accordance with quality requirements. Validation consists of a technical review of all data that directly support the project decisions so that any limitations of the data relative to project goals are delineated and the associated data are qualified accordingly. The V&V process defines the criteria that constitute data quality, namely PARCCS parameters. Data traceability and archival are also addressed. V&V criteria include the following:

- Chain-of-custody;
- Preservation and hold-times;
- Instrument calibrations;
- Preparation blanks;
- Interference check samples (metals);
- Matrix spikes/matrix spike duplicates (MS/MSD);
- Laboratory control samples (LCS);
- Field duplicate measurements;
- Chemical yield (radiochemistry);
- Required quantitation limits/minimum detectable activities (sensitivity of chemical and radiochemical measurements, respectively); and
- Sample analysis and preparation methods.

V&V results of electronic data are documented in the ER Remediation, Industrial D&D, and Site Services (RISS) Project File as "PlanvsActuals2.mdb" in Microsoft ACCESS).

Precision

Precision of results was acceptable with the qualifications discussed below, based on the frequency and results of duplicate Quality Control (QC) samples.

Laboratory precision was acceptable based on the frequency of MSD and laboratory duplicates (LDs) analyzed (≥ 1 /laboratory batch, or $\geq 1:20$ QC-to-real sample ratio), and the resulting relative percent difference (RPD) values resulting from those analyses (one exception was aluminum, at 48% RPD, in laboratory batch 2050380, but this does not affect project decisions). Maximum RPD values were typically $<15\%$; the DQO is $<30\%$ for soil matrices.

Field sampling precision was adequate for radionuclides, but was indeterminate for nonradionuclides. Eleven field duplicates were analyzed for radiological constituents (seven for gamma spectroscopy and four for alpha spectroscopy). Precision was adequate based on repeatability of both field duplicate and real sample results to quantities well below associated RFCA ALs. No field duplicates were acquired for nonradiological samples, though all corresponding real results (Completeness) were repeatable at levels well below RFCA Tier II ALs. Based on the overall low concentrations as compared with ALs, there is no impact on decisions.

Accuracy and Bias

Location measurements recorded on maps are within ± 1 ft, based on the Global Positioning System (GPS) technology in use (Trimble 4800 Series). Location measurements in trenches were offset, and the measurement was recalculated. Several confirmation sampling locations were not measured but were hand plotted and estimated.

The frequency of LCS was adequate, with at least one LCS per batch, though the lists of analytes were short for all methods except SW6010 (metals), where a complete list of analytes was used; likewise for MS. All LCS recoveries, for all chemical (nonradiological) analytes, were between 66% and 112%, which is within associated QC tolerances.

MS recoveries ranged from 37% to 121% with exceptions consisting of one iron and one silica ($<16\%$), one 1,1-dichloroethene (171%), and one aluminum (928%). None of the out-of-specification occurrences impact decisions, as the magnitude of the low bias would not cause AL exceedances if results were corrected accordingly; positive biases did not cause false positives in the real samples. Chlorobenzene is qualified as an estimate for sample 02E0010-026.002, and may be biased low due to an MS recovery of 37% (the lower control limit is $\sim 75\%$) for the associated laboratory batch.

Frequency of blank analyses (method blanks) was adequate at ≥ 1 /laboratory batch for all chemical analyses. Blanks yielded no concentrations significant enough to cause a high bias in the corresponding real samples, i.e., there are no false positive results due to blank contamination.

Representativeness

Surface soil grab samples acquired for the project, are representative based on the number and location of samples acquired, in combination with the following criteria:

- Familiarity with site history and current IHSS configurations and collaborations by management and technical staff;
- Implementation of industry-standard chain-of-custody protocols;

- Compliance with sample preservation and hold times;
- Documented and Site-approved methods, particularly standard operating procedures (SOPs) controlled by the subcontractor; and
- Compliance with CDPHE- and EPA-approved sampling and analysis plans (the IASAP and IASAP Addendum).

Completeness

Sampling completeness is addressed in Table 14. The required minimum numbers of real samples and laboratory QC were acquired. The variance between planned versus actual field duplicates and their impact on decisions was addressed in the Precision section.

A summary of the V&V for all Electronic Data Deliverable (EDD) records, presented in Table 15, indicates no rejection of the data. All estimated values were well less than associated RFCA ALs. Validation of results was completed at the minimum frequency of $\geq 10\%$ per method and matrix-type, with the exception of radionuclides, where V&V is in progress. However, adequate frequency and performance of LCS for the radiological suites suggests that these data are valid. Note that headers within Table 15 indicate line item codes and generic labels for method types.

Comparability

Results presented are comparable with CERCLA data on a site- and DOE complex-wide basis. This comparability is based on:

- Use of standardized engineering units in the reporting of measurement results;
- Consistent sensitivities of measurements (\leq the required quantitation limit [RQL] or minimum detectable activity [MDA]);
- Use of site-approved procedures (Contractual Statements of Work for laboratory analyses);
- Systematic quality controls; and
- Thorough documentation of the planning, sampling/analysis process, and data reduction into formats designed for making decisions posed from the project's original data quality objectives.

Sensitivity

Adequate sensitivities, (i.e., detection limits) were attained for most analytes. Exceptions are listed in Tables 14 and 15. Although the listed analytes had detection limits in excess of associated subsurface soil action levels, none of the compounds were detected at or above the detection limit denoted by a "U" flag associated with the results. If a result was a "nondetect" (i.e., flagged as "U" by the laboratory), then it was not included in the SOR calculation. Ideally, detection limits are at least one-half the associated action level for those exceedances listed in Tables 16 and 17 below.

Table 14
IHSS Group 100-4-Sample Completeness Summary

Minimum Number of Samples Planned (including Media)	Number of Samples Taken (Real and QC)	Project Decisions (Conclusions) & Uncertainty
VOC		
None	2 real, soil 1 pipe scale	No contamination >RFCA Tier II
SVOC		
1 soil	3 real, soil	No contamination >RFCA Tier II
METALS		
5 soil	2 (full suite), soil, real 5 (lead only), soil, real 1 soil (TCLP), soil 1 pipe scale (TCLP), soil,	No contamination >RFCA Tier II
pH		
1 soil	5, soil, real	All pH results >7; no further evidence of acid spills
RADIOLOGICAL (APLHA SPEC)		
PWLs (trench bottom) - 14 Soil Sumps (excavation bottom) - 4 Source Pit - 2	55 real, soil 4 field duplicates 3 water 4 concrete	No contamination >RFCA Tier II; Water results indeterminate from Laboratory 559 due to high reporting limit
RADIOLOGICAL (GAMMA SPEC)		
Sumps (excavation bottom) - 4 Source Pit - 2	69 real, 4 duplicates (soil) 2 concrete	No contamination >RFCA Tier II

Table 15
IHSS Group 100-4 – Verification & Validation for Electronic Data Deliverable Records

SWD Validation Qualifier Code	Total of CAS Number	ASP-A- 003	ASP-A- 004	ASP-A- 011	MET-A- 023	MET-A- 024	MET-A- 031	MIS-A- 004	RC10B 019	RFAA 005	URS10B 019	URS10B 19	VOAA 011	VOAA 011	SVO-A 007
		Alpha Spec			Metals			Corrosivity	Gamma Spec				VOC		SVOC
Null	2004	5	270	3	70	3	38	1	439	19	510	207	345	82	12
I	23							1					8	8	6
J	16			2	12		2								
V	220	10		4	34	4	4			38					126
VI	326							4					134	126	62
JB1	3													2	1
UJ	17				9		2								6
UJ1	3														3
Total	2612	15	270	9	125	7	46	6	439	38	510	207	487	218	216
% Validated	23%	5%	0%	%	38%	%		83%	3%	100%	%		39%		94%

Table 16
IHSS Group 100-4 Analytes with Detection Limits Exceeding Tier I Action Levels

CAS Number	Analyte Name	Reporting Limit (µg/kg)	Tier I AL (µg/kg)
121-14-2	2,4-Dinitrotoluene	100	5.01E+01
606-20-2	2,6-Dinitrotoluene	100	3.88E+01
111-44-4	Bis(2-Chloroethyl) Ether	52	9.73E+00
621-64-7	N-Nitroso-di-n-propylamine	94	1.89E+00

Table 17
IHSS Group 100-4 Analytes with Detection Limits Exceeding Tier II Action Levels

CAS Number	Analyte Name	Reporting Limit (µg/kg)	Tier II (µg/kg)
51-28-5	2,4-Dinitrophenol	520	5.29E+01
121-14-2	2,4-Dinitrotoluene	100	5.01E-01
606-20-2	2,6-Dinitrotoluene	100	3.88E-01
91-94-1	3,3'-Dichlorobenzidine	73	4.84E+00
91-94-1	3,3'-Dichlorobenzidine	75	4.84E+00
7440-38-2	Arsenic	3,400	2.99E+03
111-44-4	Bis(2-Chloroethyl) ether	51	9.73E-02
621-64-7	N-nitroso-di-n-propylamine	92	1.89E-02
98-95-3	Nitrobenzene	91	5.39E+01
87-86-5	Pentachlorophenol	400	2.11E+01

5.3 Data Quality Summary

The data presented in this section have been verified and validated for the purpose of corroborating decisions to acceptable levels of confidence as stated in the original DQOs for this project. Qualifications of the data are described above.

6.0 IHSS GROUP 100-5 ACTIVITIES

IHSS Group 100-5 consists of PAC 100-609, the security incinerator. The security incinerator was located south of Building 121 and was used for incineration of classified documents. The location of IHSS Group 100-5 is shown in Figure 1. During some period in its operating history, the incinerator was used to burn no carbon required (NCR)-type paper containing polychlorinated biphenyls (PCBs), which could have resulted in the generation of dioxins and furans. It is known that ash from the incinerator was being disposed at the Present Landfill (PAC NW-114) in December 1980. It is not known whether this was standard practice throughout the incinerator's operating history. According to one source, "tons" of NCR paper, containing up to 10% to 20% PCBs, was burned in the incinerator.

6.1 Site Characterization

As described in IASAP Addendum #IA-02-01 (DOE 2001b), PCOCs at IHSS Group 100-5 were determined based on historical knowledge (DOE 1992). PCOCs at this site are dioxins, furans, and PCBs. Surface soil samples were collected from six sampling locations beneath the concrete slab and analyzed. Sampling specifications are shown in Table 18, and results are shown in Table 19.

6.2 Accelerated Action Description

Accelerated action activities including a description of the AOC and removal activities are described below.

6.2.1 Area of Concern

The AOC, shown on Figure 19, was determined based on analytical results from IASAP Addendum #IA-02-01 (DOE 2001b) sampling. The AOC is defined as the area with concentration of contaminants greater than MDLs. The AOC map also illustrates the limits of RFCA Tier II and Tier I AL exceedances for PCBs. Because there are no existing RFCA ALs for dioxin and furan or congeners, a different framework was used for comparison of analytical results. Both EPA cleanup guidelines (EPA 1998) for residential and industrial use (in accordance with RFCA) and a reference value of 9 parts per trillion (ppt) toxicity equivalents (TEQ) (consultative process) were used for comparison. Results for dioxin and furan congeners were converted to TEQ using a toxicity equivalency factor (TEF) in accordance with SW8290 (EPA 1994d) and a recent World Health Organization (WHO) study (WHO 1998).

The TEF for each compound is presented in Table 20. The TEQ values for dioxin congeners are summed for each sampling location and the TEQ values for furan congeners were summed for each sampling location. These data are presented in Table 21. As shown on Table 21 there are no exceedances of the 9 ppt TEQ for the summed dioxin compounds. Results at one location, BT39-003, indicate a value of 10.87 ppt for the summed dioxin and furan congeners. While this value is slightly greater than the reference value of 9 ppt TEQ it as well as all other summated TEQ values are well within the cited Front Range background range of 0.1 to 57.5 ppt TEQ (EPA 2001). Additionally, the maximum 2,3,7,8-TCDD TEQ of 6.8 ppt was less than the 9 ppt TEQ value.

Additionally, as shown on Figure 20, there are no concentrations greater than RFCA Tier II, Tier I, or proposed WRW or ecological ALs (PCBs) or EPA cleanup guidelines. SOR calculations are based on PCB results. The Tier II SOR calculation results for nonradionuclides are presented on Figure 21. Dioxin and furan congeners do not have proposed RFCA ALs.

Table 18
IHSS Group 100-5, PAC 100-609 – Characterization Sampling Specifications

IHSS Group	IHSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval Beneath Slabs (ft)	Analyte	Laboratory Method
100-5	PAC 100-609 – Security Incinerator	BT38-A001	2081396	749167	Surface Soil	0.0-0.5	Dioxin and Furan	8290
		BT38-A001	2081396	749167	Surface Soil	0.0-0.5	PCBs	8082
		BT38-A002	2081406	749165	Surface Soil	0.0-0.5	Dioxin and Furan	8290
		BT38-A002	2081406	749165	Surface Soil	0.0-0.5	PCBs	8082
		BT39-A001	2081397	749170	Surface Soil	0.0-0.5	Dioxin and Furan	8290
		BT39-A001	2081397	749170	Surface Soil	0.0-0.5	PCBs	8082
		BT39-A002	2081406	749170	Surface Soil	0.0-0.5	Dioxin and Furan	8290
		BT39-A002	2081406	749170	Surface Soil	0.0-0.5	PCBs	8082
		BT39-A003	2081400	749164	Surface Soil	0.0-0.5	Dioxin and Furan	8290
		BT39-A003	2081400	749164	Surface Soil	0.0-0.5	PCBs	8082
		BT39-A004	2081402	749170	Surface Soil	0.0-0.5	Dioxin and Furan	8290
		BT39-A004	2081402	749170	Surface Soil	0.0-0.5	PCBs	8082

Table 19
IHSS Group 100-5, PAC 100-609--Characterization Data Summary

IHSS Group	IHSS/PAC/UBC Site	Analyte	Maximum (µg/kg)	MDL (µg/kg)	Tier II AL (µg/kg)	Tier I AL (µg/kg)
100-5	100-609 - Security Incinerator	Aroclor-1016	19.5	<.069	224,000	2,240
		Aroclor-1221	ND	<.069	224,000	2,240
		Aroclor-1232	ND	<.069	224,000	2,240
		Aroclor-1242	23	<.069	224,000	2,240
		Aroclor-1248	42	<.069	224,000	2,240
		Aroclor-1254	30	<.069	224,000	2,240
		Aroclor-1260	17.5	<.069	224,000	2,240
		Analyte	Maximum (pg/g)	RDL (pg/g)	EPA Residential Cleanup Guidance (pg/g)	EPA Industrial Cleanup Guidance (pg/g)
		1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	33	<.22	1,000	5,000
		1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	6.2	<.22	1,000	5,000
		1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.34	<.22	1,000	5,000
		1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.23	<.22	1,000	5,000
		1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	1.5	<.22	1,000	5,000
		1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	1.2	<.22	1,000	5,000
		1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	1.2	<.22	1,000	5,000
		1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	1.2	<.22	1,000	5,000
		1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	1.2	<.22	1,000	5,000
		1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.82	<.22	1,000	5,000
		1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	4.3	<.22	1,000	5,000
		2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.82	<.22	1,000	5,000
		2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	1.9	<.22	1,000	5,000
		2,3,7,8-Tetrachlorodibenzofuran (TCDF)	12	<.22	1,000	5,000
		2,3,7,8-Tetrachlorodibenzodioxin (TCDD)	6.8	<.22	1,000	5,000
		1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	290	<.22	1,000	5,000
		1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	16	<.22	1,000	5,000

Table 20
IHSS Group 100-5-Toxicity Equivalent Comparison

Analyte	TEF
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.01
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.01
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.01
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.10
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.10
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.10
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.10
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.10
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.10
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	1.00
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.05
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.10
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.50
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.10
2,3,7,8-Tetrachlorodibenzodioxin (TCDD)	1
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	.0001
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	.0001

Table 21
Summed TEQs by Sample Location

Sampling Location	Summed CDD TEQs (ppt)	Summed CDF TEQs (ppt)	Summed CDD and CDF TEQs (ppt)
BT38-001	6.60	0.96	7.56
BT38-002	4.42	0.61	1.03
BT39-001	4.30	0.93	5.23
BT39-002	2.35	0.29	2.64
BT39-003	8.06	2.81	10.87
BT39-004	1.95	0.90	2.85

In accordance with the IASAP (DOE 2001a), the AOC based on characterization data becomes the revised PAC shape. This change will be archived through the Site Geographic Information Services Group.

The accelerated action objectives were developed and described in ER RSOP Notification #02-01 (DOE 2002b). The accelerated action objectives for IHSS Group 100-5 included the following:

- Remove the concrete slabs, which will be dispositioned in accordance with the RSOP for Concrete Recycling (DOE 1999a); and
- Remediate soil if dioxins or furans are found at levels greater than MDLs or a level agreed upon through the RFCA consultative process.

Remediation activities were conducted between March 6 and April 1, 2002. Dates and durations of significant activities are listed in Table 22.

4
72

Table 22
Dates and Duration of Accelerated Action Activities

Activity	Start Date	End Date	Duration
Remove incinerator slabs	March 6, 2002	March 6, 2002	1 Day
Characterization sampling at PAC 100-609	March 7, 2002	March 7, 2002	1 Day
Site reclamation	March 21, 2002	April 1, 2002	1 Day

Photographs of site activities are provided in Appendix A.

6.2.2 Removal Activities

Concrete Slabs

The two slabs at IHSS Group 100-5 were removed using a forklift after a corner of the slab was broken up sufficiently with a jackhammer to gain access to the underlying soil. The main slab was 20 inches thick. One composite sample was collected from the concrete for waste characterization. The sample was analyzed for metals, dioxins, and furans. The concrete slabs were surveyed for radiological constituents and recycled in accordance with the RSOP for Recycling Concrete (DOE 1999a).

Soil Removal

Because all analytical results indicated that dioxin and furan concentrations were less than EPA cleanup guidelines for residential use and the TEQ of 9 ppt and PCBs were less than RFCA Tier II ALs, no soil was removed. Therefore, confirmation samples were not collected because soil was not remediated. Characterization samples were analyzed at an offsite laboratory and also serve as confirmation samples.

6.3 Deviations from the ER RSOP

Deviations from the ER RSOP include the following:

- Dioxin and furan concentrations were compared to EPA cleanup guidelines and TEQ because RFCA Tier I and Tier II ALs were not available; and
- IHSS Group 100-5 was not revegetated because the Site security force needed to use this site.

6.4 Waste Management

Waste from the IHSS Group 100-5 consisted of concrete, which was recycled in accordance with the RSOP for Concrete Recycling (DOE 1999a).

6.5 Site Reclamation

IHSS Group 100-5 was covered with approximately 6 to 8 inches of roadbase, wheel-rolled, and compacted with a loader.

7.0 POST-REMEDATION CONDITIONS

Residual contamination concentrations, MDLs, and EPA cleanup guidelines, at IHSS Group 100-5 are shown in Figure 21.

5
73

8.0 STEWARDSHIP EVALUATION

The IHSS Group 100-5 stewardship evaluation was conducted through ongoing consultation with the regulatory agencies. The regulatory agencies were informed through project updates, e-mail, telephone contact, and personal contact throughout the project duration.

8.1 Current Site Conditions

As discussed in Section 6.2.2, accelerated actions at IHSS 100-5 consisted of removal of the Security Incinerator slab. Residual contamination at IHSS Group 100-5 is summarized in Table 19 and shown on Figure 21. Based on the accelerated action the following conditions exist at IHSS Group 100-5:

- PCB concentrations in surface soil are slightly greater than MDL.
- PCB Tier II SORs are less than 1.
- Summed congener concentrations at sampling location BT39-003 were slightly greater than the TEQ of 9 but within the Front Range background range, and significantly less than EPA residential cleanup guidelines.
- Residual congener concentrations at all other locations were less than the TEQ of 9, within the Front Range background range, and EPA residential cleanup guidelines.
- The site was backfilled with the excavated soil and covered with approximately 6 to 8 inches of roadbase.

8.2 Near Term Management Recommendations

Because residual contaminant concentrations are low and potential contaminant sources were removed, mitigated or found not to have existed, no specific near-term management techniques are required. Contaminant concentrations in soil remaining at IHSS Group 100-5 do not trigger any further accelerated action. Excavation at the site will continue to be controlled through the Site Soil Disturbance Permit process. Fencing and signs restricting access will be posted to minimize disturbance to newly-revegetated areas. Site access and security controls and the Soil Disturbance Permit process will remain in place pending implementation of long-term controls.

8.3 Long-Term Stewardship Recommendation

Based on remaining environmental conditions at IHSS Group 100-5, no specific long-term stewardship activities are recommended for IHSS Group 100-5 beyond the generally applicable Site requirements that may be imposed on this area in the future, which are dependent upon the final remedy selected. Institutional controls that will be used as appropriate for this area include the following:

- Prohibitions on construction of buildings in the IA;
- Restrictions on excavation or other soil disturbance; and
- Prohibitions on groundwater pumping in the area of IHSS Group 100-5.

No specific engineered controls are recommended as a result of the conditions remaining in IHSS Group 100-5; and

No specific environmental monitoring is recommended as a result of the environmental conditions remaining in IHSS Group 100-5.

No specific institutional or physical controls, such as fences, are recommended as a result of the environmental conditions remaining in IHSS Group 100-5.

This closeout report and associated documentation will be retained as part of the Rocky Flats administrative record file. These specific long-term stewardship recommendations will also be summarized in the Rocky Flats *Long-Term Stewardship Strategy*.

IHSS Group 100-5 will be evaluated as part of the Sitewide CRA, which is part of the RFI/RI and CMS/FS that will be conducted for the Site. The need for and extent of any, more general, long-term stewardship activities will also be analyzed in RFI/RI and CMS/FS and will be proposed as part of the preferred alternative in the Proposed Plan for the Site. Institutional controls and other long-term stewardship requirements for Rocky Flats will ultimately be contained in the CAD/ROD, in any post-closure Colorado Hazardous Waste Act permit that may be required, and in any post-RFCA agreement.

8.3.1 Accelerated Action Stewardship

Stewardship actions that were implemented during the accelerated action included posting signs and barriers, including yellow chain and jersey barriers.

9.0 DATA QUALITY ASSESSMENT

The DQOs for this project, as defined in the IASAP (DOE 2001a), were achieved based on the DQA provided in the following sections. The DQO/DQA process ensures that the type, quantity, and quality of environmental data used in decision making are defensible, with emphasis on attaining adequate (statistical) confidence in the decisions. The DQO/DQA process is based on the following guidance and requirements:

- EPA QA/G-4, 1994. Guidance for the Data Quality Objective Process (EPA 1994a);
- EPA QA/G-9, 1998. Guidance for the Data Quality Assessment Process; Practical Methods for Data Analysis (EPA 1998); and
- DOE Order 414.1A, Quality Assurance (DOE 1999b).

V&V of the data are the primary components of the DQA. The final data are compared with original project DQOs and evaluated with respect to project decisions; uncertainty within the decisions; and quality criteria required for the data, specifically PARCCS. Validation criteria are consistent with the following RFETS-specific documents and industry guidelines:

- EPA 540/R-94/013, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (EPA 1994c);
- EPA 540/R-94/012, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (EPA 1994b);

- K-H V&V Guidelines

- General Guidelines for Data Verification and Validation, DA-GR01-v1, December 3, 1997
- V&V Guidelines for Isotopic Determinations by Alpha Spectrometry, DA-RC01-v1, 2/13/98
- V&V Guidelines for Volatile Organics, DA-SS01-v1, 12/3/97
- V&V Guidelines for Semivolatile Organics, DA-SS02-v1, 12/3/97
- V&V Guidelines for Metals, DA-SS05-v1, 12/18/97; and

- Lockheed-Martin, 1997, Evaluation of Radiochemical Data Usability, ES/ER/MS-5.

This report will be submitted to the CERCLA AR for permanent storage within 30 days of approval by CDPHE and/or EPA.

9.1.1 DQO Decisions

Consistent with the original DQO decision rules of the project, SOR calculation was conducted, on sample results as applicable. PCB compounds have corresponding RFCA ALs that allow an SOR to be calculated, whereas the dioxin/furan results do not. In accordance with the DQO decision logic, if the summation for radiological or non-radiological constituents does not exceed 1, then no further action is required. All PCB SORs, per sample, were below 1; therefore, no further action is required relative to PCBs.

Because there are no existing RFCA ALs for dioxin and furan congeners, a different action level framework was used to compare with the dioxin/furan results. An action level of 9 ppt TEQ was used based on the consultative process. Results for the dioxin/furan were converted to TEQ and compared directly with the TEQ of 9 ppt. No individual compounds exceeded this level, and the highest value was 6.8 ppt for dioxin. Calculations are documented in the files "PlanvsActuals2.mdb" and "Dioxin-FuranAnlyRslt.xls" in Microsoft ACCESS.

Sample quantities by analytical method are shown in Table 23.

Table 23
IHSS Group 100-5-Sampling

Analyte	Matrix	EPA Method	Number of Samples (including QC samples)
PCBs	Soil	SW8082	7
Dioxin/Furan	Soil	SW8290	7

9.1.2 Verification and Validation of Results

Verification ensures that data produced and used by the project are documented and traceable per quality requirements. Validation consists of a technical review of project

data that directly support decisions, such that any limitations of the data relative to project goals are stated. V&V criteria include the following:

- Chain-of-custody;
- Preservation and hold-times;
- Instrument calibrations;
- Preparation blanks;
- Interference check samples (metals);
- MSs/MSDs;
- LCSs;
- Field duplicate measurements;
- Chemical yield (radiochemistry);
- RQL/MDA (sensitivity of chemical and radiochemical measurements, respectively); and
- Sample Analysis and Preparation methods.

Precision

Precision of field sampling was adequate based on repeatability of both field duplicate and real sample results to quantities well below associated action levels: <9 TEQ for dioxin/furans and <2,240 parts per billion (ppb) for PCBs. Only one field duplicate was necessary based on a set of less than 20 reals (i.e., a required duplicate sample frequency of $\geq 5\%$).

Laboratory precision was acceptable based on MS/MSD comparisons, which yielded a maximum relative percent difference of 3%; the DQO is <30% for organics in soils.

Accuracy and Bias

Distance measurements recorded on maps are within ± 1 foot, based on the GPS technology in use (Trimble 4800 Series). LCSs and MSs were analyzed at an adequate frequency (≥ 1 /laboratory batch) and were within QC tolerances. For LCS, minimum recoveries were 66% for Aroclor-1016 and 74% for 123789-HXCDD; for MS, minimum recoveries were 77% for Aroclor-1260 and 72% for 1234789-HPCDF.

Blanks yielded no concentrations significant enough to cause a high bias in the corresponding real samples, i.e., there are no false positive results due to blank contamination.

Representativeness

Surface soil grab samples acquired for the project, are representative based on the number and location of samples in combination with the following criteria:

- Familiarity with site history and current IHSS configurations;
- Collaborations by management and technical staff;
- Implementation of industry-standard Chain-of-Custody protocols;
- Compliance with sample preservation and hold times;
- Documented and Site-approved methods, particularly SOPs controlled by the subcontractor; and
- Compliance with state- and EPA-approved sampling and analysis plans including the IASAP and associated SAP Addenda.

Completeness

Sampling completeness is addressed in Table 24. The required minimum numbers of QC and real samples were acquired.

Table 24
IHSS Group 100-5-Sample Completeness Summary

Number of Samples Planned (Media; Real, and QC)	Number of Samples Taken (Real and QC)	Project Decisions (Conclusions) and Uncertainty
6 real 1 duplicate	7 (total) 6 Real, 1 field duplicate	No contamination per SOR calculation
6 real 1 duplicate	7 (total) 6 Real, 1 field duplicate	No contamination per 1:1 comparison TEQ of 9

A summary of the V&V for all EDD records indicates no rejection of the data. All estimated values were well less than associated RFCA ALs. Validation of results was completed at the minimum frequency ($\geq 10\%$ per method and per real sample matrix) as shown in Table 25.

Table 25
IHSS Group 100-5-Summary of Validated Records

Validation Qualifier Codes SWD	Total of CAS Number	PEP-A-007 SW8082 PCBs	TSK-A-003 SW8290 Dioxin/Furan
Null	48	14	34
V	145	47	98

Validation Qualifier Codes SWD	Total of CAS Number	PEP-A-007 SW8082 PCBs	TSK-A-003 SW8290 Dioxin/Furan
JB	21		21
UJ	2	2	
Total Records	216	63	153
% Validated		78%	78%

Comparability

All results presented are comparable with CERCLA data on an intrasite- and DOE complex-wide basis. This comparability is based on the following:

- Use of standardized engineering units in the reporting of measurement results;
- Consistent sensitivities of measurements (≤ 0.5 corresponding action levels);
- Use of site-approved procedures (e.g., Contractual Statements of Work for laboratory analyses);
- Systematic quality controls; and
- Thorough documentation of the planning, sampling/analysis process, and data reduction into formats designed for making decisions derived from the project's original DQOs.

Sensitivity

Adequate sensitivities, in units of micrograms per kilogram ($\mu\text{g}/\text{kg}$) (ppb) for PCBs and parts per trillion (pg/g) for dioxin/furans were attained for all analytes. The maximum detection limit (DL) for PCBs was 10 ppb (Aroclor-1232); the maximum DL given for dioxin/furans was zero. Ideally, detection limits are at least one-half of analyte's associated action level; all DLs were well below that for this project.

9.1.3 Data Quality Summary

The data presented in this report have been verified and validated for the purpose of corroborating decisions to acceptable levels of confidence as stated in the project's original DQOs. There are no qualifications of the data. Results indicate that no chemical contamination exists in excess of RFCA Tier I or Tier II ALS for PCBs, or for dioxins/furans in excess of TEQ. No further actions are necessary for IA Group 100-5.

10.0 REFERENCES

CDPHE, 2002, Environmental Restoration RFCA Standard Operating Protocol FY02 Notification #02-01 Approval Letter, January 16.

DOE, 1992, Historical Release Report for the Rocky Flats Plant, Golden, CO.

DOE, 1997, Closure Plan for Building 123 Components of RCRA Unit 40, Rocky flats Environmental Technology Site, Golden, CO.

DOE, 1999a, RFCA Standard Operating Protocol for Recycling Concrete, Rocky Flats Environmental Technology Site, Golden, CO.

DOE 1999b, DOE Order 414.1A Order 414.1A, Quality Assurance.

DOE, 2000a, Final Sampling and Analysis Plan for the Characterization of Under Building Contamination for UBC 123 and Building 886 Implementing Horizontal Directional Drilling and Environmental Measurement While Drilling, Rocky Flats Environmental Technology Site, Golden, Colorado, May.

DOE, 2000b, Industrial Area Data Summary Report, Rocky Flats Environmental Technology Site, Golden, CO, September.

DOE, 2001a, Industrial Area Sampling and Analysis Plan, Rocky Flats Environmental Technology Site, Golden, CO, June.

DOE 2001b, Industrial Area Sampling and Analysis Plan Addendum #IA-02-01, Rocky Flats Environmental Technology Site, Golden, CO, November.

DOE, 2001c, Annual Update for the Historical Release Report, Rocky Flats Environmental Technology Site, Golden, CO, September.

DOE 2001d, Final Data Summary Report for the Characterization of UBCs 123 and 886, Rocky Flats Environmental Technology Site, Golden, CO, September.

DOE 2002a, Environmental Restoration RFCA Standard Operating Protocol for Routine Soil Remediation, Rocky Flats Environmental Technology Site, Golden, CO. January.

DOE 2002b, Environmental Restoration RFCA Standard Operating Protocol Notification #02-01, Rocky Flats Environmental Technology Site, Golden, CO, January.

EPA, 1994a, QA/G-4, Guidance for the Data Quality Objective Process.

EPA, 1994b, 540/R-94/012, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review

EPA, 1994c, 540/R-94/013, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review.

EPA, 1994d, Test Methods for Evaluating Solid Wastes.

EPA, 1998 QA/G-9, Guidance for the Data Quality Assessment Process; Practical Methods for Data Analysis, U.S. EPA 540/R-94/013, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review.

EPA, 2001, Denver Front Range Study Dioxins in Surface Soil, July.

RMRS, 1997, Closure Plan for the Building 123 Components of RCRA Unit 40, Rocky Flats Environmental Technology Site, Golden, CO, November.

RMRS, 1998a, Proposed Action Memorandum for the Decommissioning of Building 123, RF/RMRS-97-012, Rocky Flats Environmental Technology Site, Golden, Colorado, March.

RMRS, 1998b, Closure Certification for the Building 123 Components of RCRA Unit 40, Rocky Flats Environmental Technology Site, Golden, CO, May.

RMRS, 1998c, Final Close-Out Report, Building 123 Decommissioning Project RF/RMRS-98-253.UN, Rev 0, Rocky Flats Environmental Technology Site, Golden, Colorado September.

World Health Organization, 1998, Assessment of the Health Risk of Dioxins: Re-Evaluation of the Tolerable Daily Intake (TDI), WHO European Center for Environment and Health, Geneva, Switzerland, May.

817

**APPENDIX A
PROJECT PHOTOGRAPHS**

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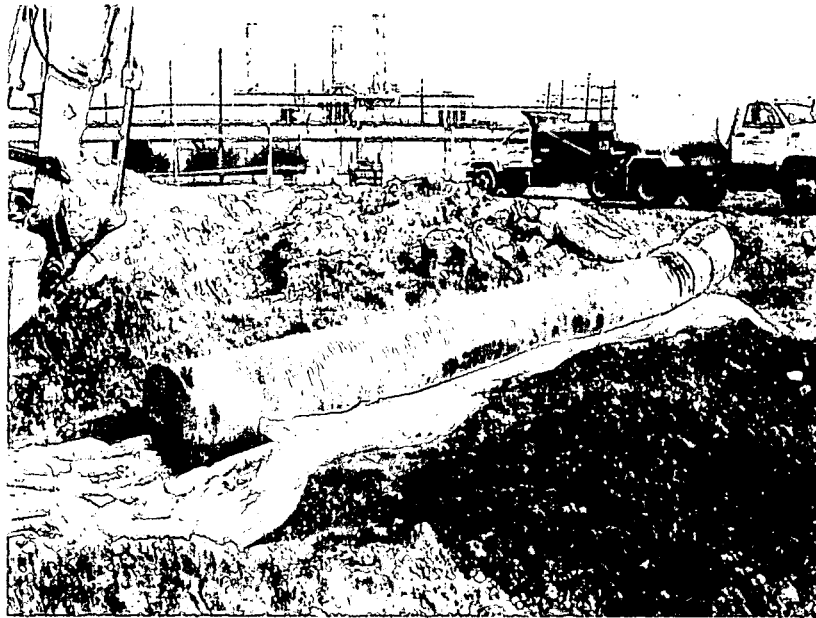
IHSS GROUP 100-4



Photograph 1. Building 123- Slab, rubble



Photograph 2. Building 123 Footer



Photograph 3. Building 123 Source Well



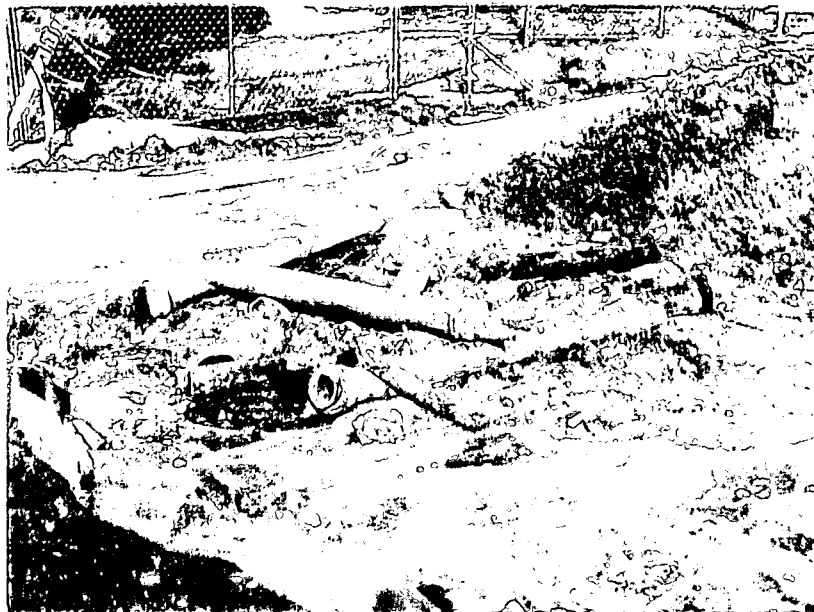
Photograph 4. Building 123 Source Well - Top



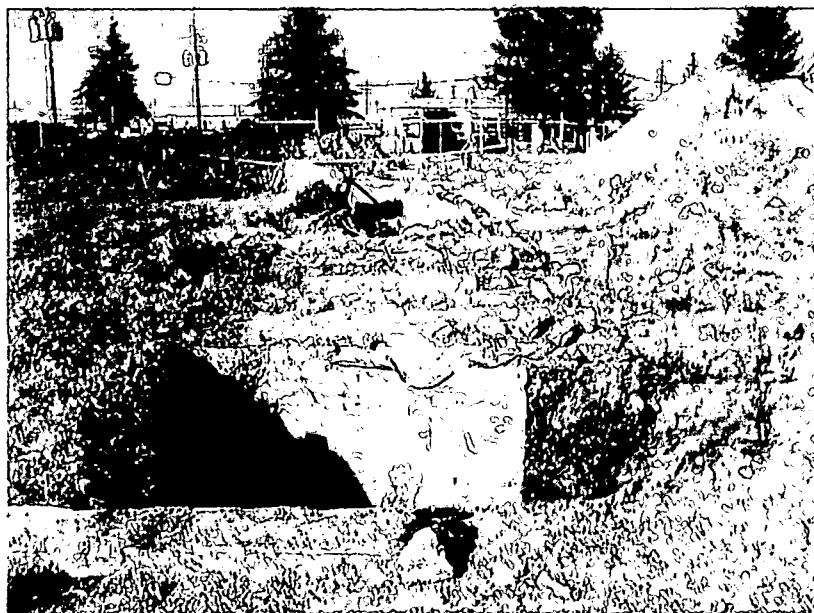
Photograph 5. Building 123 Source Well Excavation Backfilled



Photograph 6. Building 123 Manhole MH-2



Photograph 7. P-2 Waste Line from Building 123 North Wing



Photograph 8. Building 123 Sumps



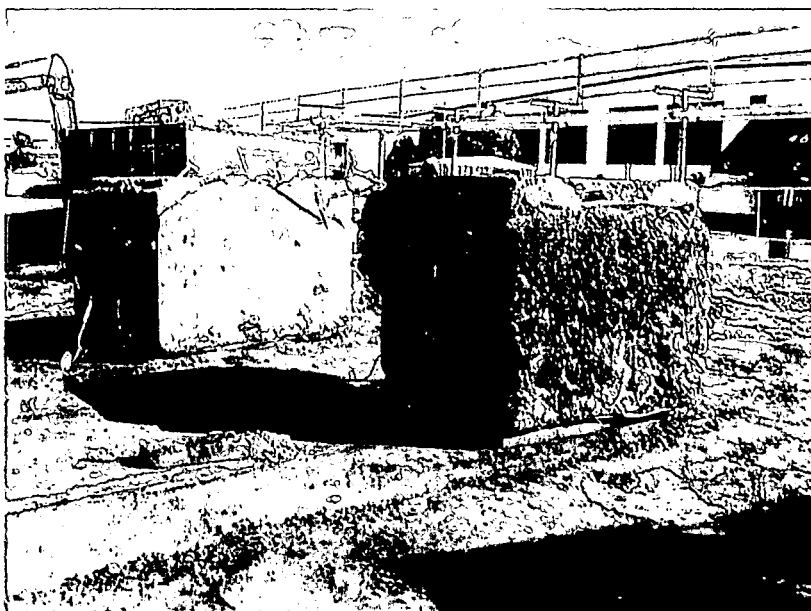
Photograph 9. Building 123 Room 157 & 158 Sumps



Photograph 10. Building 123 Room 156 Sump



Photograph 11. Building 123 Sump Piping



Photograph 12. Building 123 Room 157 & 158 Sumps



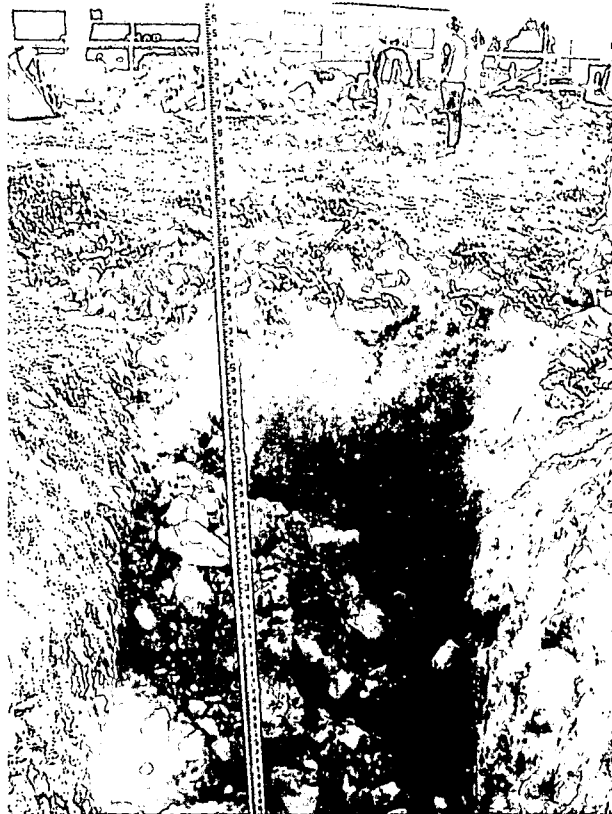
Photograph 13. Liquid from Room 112 Process Line 2



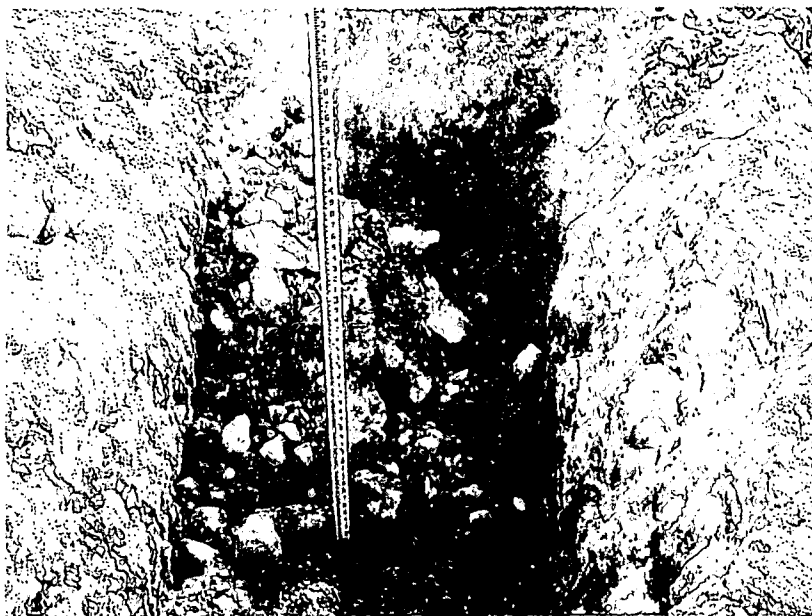
Photograph 14. Room 112 Process Line 1



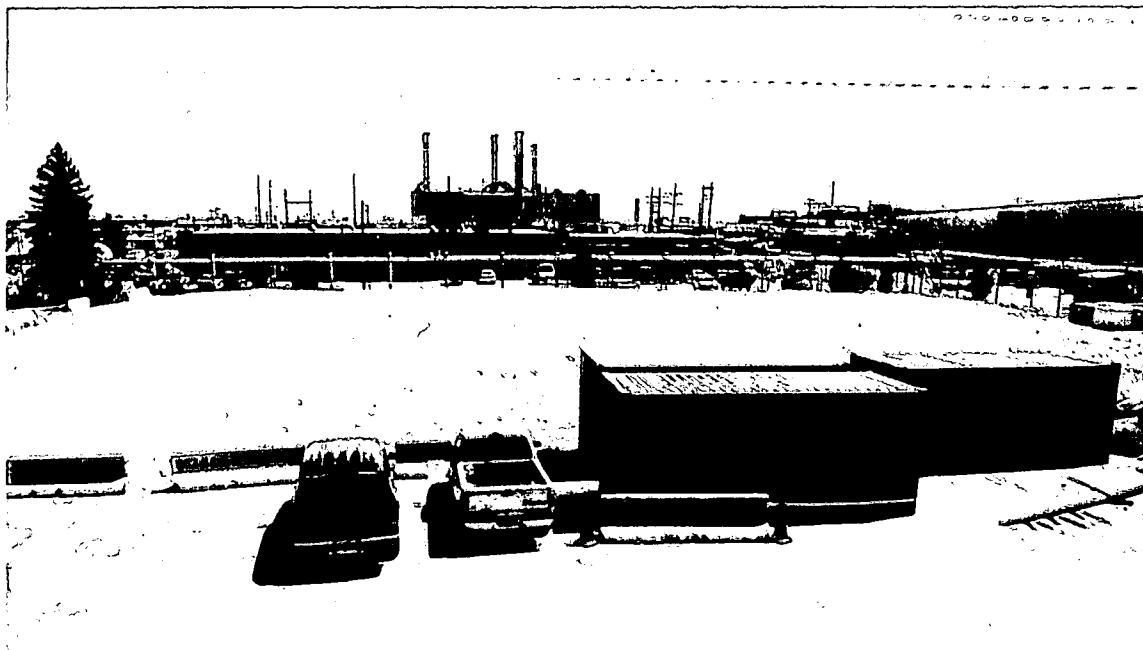
Photograph 15. Room 112 Process Line 2 Looking West



Photograph 16. Building 123 Pb Remediation Area

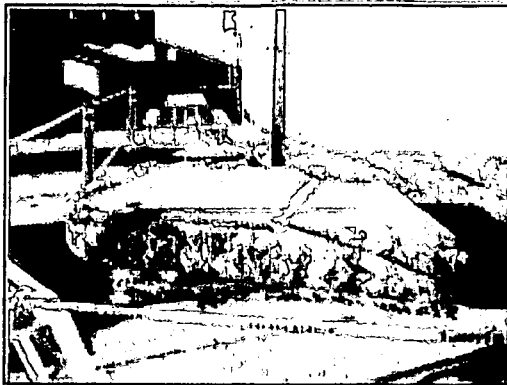


Photograph 17. Building 123 Pb Remediation Area Depth

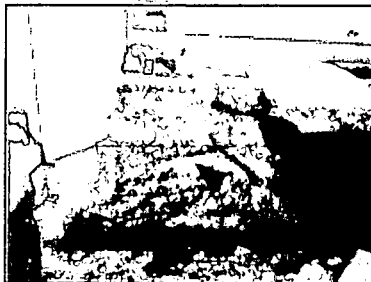


Photograph 18. B123 Restored

IHSS Group 100-5



Photograph 1. Twenty-inch-thick incinerator slab removed (looking north)



Photograph 2. Incinerator slab (looking east)

92

APPENDIX B
ANALYTICAL DATA

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DATE	SAMPLE ID	MATERIAL	LOC.	ANALYST	ANALYTICAL CODE	FIELD NO.	SAMPLE NO.	LOCATION	ANALYTE	COUNT	RESULT	UNITS	LAB	STATUS	REMARKS
02E0001-008.001	Concrete	ASP-A-003	ALPHA SPEC	02E0001-008	BV38-0004	CURIUM-242	15510-73-3	-0.00309	PCVG	J	U				0.0386
02E0001-008.001	Concrete	ASP-A-003	ALPHA SPEC	02E0001-008	BV38-0004	CURIUM-245/248	7440-81-9	0.0482	PCVG	J					0.0206
02E0001-008.001	Concrete	ASP-A-003	ALPHA SPEC	02E0001-008	BV38-0004	Americium-241	14596-10-2	0.0237	PCVG	J					0.0178
02E0001-008.001	Concrete	ASP-A-003	ALPHA SPEC	02E0001-008	BV38-0004	Americium-241	14596-10-2	0.0459	PCVG	J	V				0.0386
02E0001-008.001	Concrete	ASP-A-003	ALPHA SPEC	02E0001-008	BV38-0004	CURIUM-244	13881-15-2	0.00587	PCVG	J	U				0.0455
02E0001-008.001	Concrete	ASP-A-003	ALPHA SPEC	02E0001-008	BV38-0004	Plutonium-239/240	10-12-8	-0.0000783	PCVG	J	U				0.06
02E0001-008.001	Concrete	ASP-A-003	ALPHA SPEC	02E0001-008	BV38-0004	Plutonium-239/240	10-12-8	0.0213	PCVG	J	V				0.0384
02E0001-008.001	Concrete	ASP-A-003	ALPHA SPEC	02E0001-008	BV38-0004	Uranium-234	11-08-5	0.998	PCVG	J					0.0964
02E0001-008.001	Concrete	ASP-A-003	ALPHA SPEC	02E0001-008	BV38-0004	Uranium-234	11-08-5	1.25	PCVG	J	V				0.0929
02E0001-008.001	Concrete	ASP-A-003	ALPHA SPEC	02E0001-008	BV38-0004	Uranium-235	15117-96-1	0.0993	PCVG	J					0.0676
02E0001-008.001	Concrete	ASP-A-003	ALPHA SPEC	02E0001-008	BV38-0004	Uranium-235	15117-96-1	0.128	PCVG	J	V				0.0932
02E0001-008.001	Concrete	ASP-A-003	ALPHA SPEC	02E0001-008	BV38-0004	Uranium-238	7440-61-1	0.881	PCVG	J	V				0.0448
02E0001-008.001	Concrete	ASP-A-003	ALPHA SPEC	02E0001-008	BV38-0004	Uranium-238	7440-61-1	1.03	PCVG	J					0.0794
02E0001-008.002	Concrete	ASP-A-004	ALPHA SPEC	02E0001-008	BV38-0004	CURIUM-242	15510-73-3	0	PCVG	J	V				0.0178
02E0001-008.002	Concrete	ASP-A-004	ALPHA SPEC	02E0001-008	BV38-0004	CURIUM-245/248	7440-81-9	0.126	PCVG	J	J	247			0.02
02E0001-008.002	Concrete	ASP-A-004	ALPHA SPEC	02E0001-008	BV38-0004	CURIUM-244	13881-15-2	-0.0029	PCVG	J	V				0.0362
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	ACTINIUM-228	7440-34-8	1.22	PCVG						0.0825
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	ACTINIUM-228	7440-34-8	1.34	PCVG		V				0.0635
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	ANTIMONY-125	14234-35-6	-0.0124	PCVG		V				0.0515
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	ANTIMONY-125	14234-35-6	0.00838	PCVG						0.052
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	CERIUM-144	14762-78-8	-0.0485	PCVG		V				0.113
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	CERIUM-144	14762-78-8	-0.0437	PCVG						0.114
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	COBALT-60	10198-40-0	0.00613	PCVG		V				0.0201
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	COBALT-60	10198-40-0	0.0187	PCVG						0.0212
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	EUROPIUM-152	14683-23-9	-0.0232	PCVG						0.0525
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	EUROPIUM-152	14683-23-9	-0.0184	PCVG		V				0.0525
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	EUROPIUM-154	15585-10-1	-0.0093	PCVG		V				0.0635
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	EUROPIUM-154	15585-10-1	-0.00844	PCVG						0.063
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	EUROPIUM-155	14391-16-3	0	PCVG						0.059
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	EUROPIUM-155	14391-16-3	0	PCVG		V				0.0596
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	POTASSIUM-40	13966-00-2	38.6	PCVG						0.144
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	POTASSIUM-40	13966-00-2	38.7	PCVG		V				0.157
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	PROMETHIUM-144	7440-12-2	-0.00441	PCVG		V				0.0157
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	PROMETHIUM-144	7440-12-2	0.000483	PCVG						0.0158
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	PROMETHIUM-148	146PM	0.0109	PCVG		V				0.0254
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	PROMETHIUM-148	146PM	0.0204	PCVG						0.0259
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	RUTHENIUM-106	13967-48-1	0.0243	PCVG		V				0.162
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	RUTHENIUM-106	13967-48-1	0.04	PCVG						0.156
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	THORIUM-234	15065-10-8	0.754	PCVG						0.566
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	THORIUM-234	15065-10-8	1.27	PCVG		V				0.562
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	YTRIUM-88	13982-36-0	0.00255	PCVG		V				0.0138
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	YTRIUM-88	13982-36-0	0.0108	PCVG						0.0145
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	Americium-241	14596-10-2	-0.024	PCVG	J	V				0.0647
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	Americium-241	14596-10-2	0.0067	PCVG	J	U				0.0658
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	CESIUM-134	13967-70-9	-0.008	PCVG	J	V				0.0163
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	CESIUM-134	13967-70-9	-0.00189	PCVG	J	U				0.016
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	CESIUM-137	10045-97-3	2.32	PCVG						0.019
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	CESIUM-137	10045-97-3	2.35	PCVG		V				0.0178
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	Lead	7439-92-1	1.41	PCVG						0.0311
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	Lead	7439-92-1	1.41	PCVG		V				0.0317
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	Uranium-235	15117-96-1	0.0828	PCVG	J	U				0.127
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	Uranium-235	15117-96-1	0.169	PCVG	J	V				0.126
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	Uranium-238	7440-61-1	0.754	PCVG	J					0.566
02E0001-008.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-008	BV38-0004	Uranium-238	7440-61-1	1.27	PCVG	J	V				0.562
02E0001-009.001	Concrete	ASP-A-003	ALPHA SPEC	02E0001-009	BU38-0011	Americium-241	14596-10-2	0.0384	PCVG	J	V				0.0165
02E0001-009.001	Concrete	ASP-A-003	ALPHA SPEC	02E0001-009	BU38-0011	Plutonium-239/240	10-12-8	0.029	PCVG	J	V				0.0722
02E0001-009.001	Concrete	ASP-A-003	ALPHA SPEC	02E0001-009	BU38-0011	Uranium-234	11-08-5	1.36	PCVG	J	V				0.101
02E0001-009.001	Concrete	ASP-A-003	ALPHA SPEC	02E0001-009	BU38-0011	Uranium-235	15117-96-1	0.161	PCVG	J	V				0.11
02E0001-009.001	Concrete	ASP-A-003	ALPHA SPEC	02E0001-009	BU38-0011	Uranium-238	7440-61-1	1.06	PCVG	J	V				0.11
02E0001-009.002	Concrete	ASP-A-004	ALPHA SPEC	02E0001-009	BU38-0011	CURIUM-242	15510-73-3	-0.003	PCVG	J	V				0.0375
02E0001-009.002	Concrete	ASP-A-004	ALPHA SPEC	02E0001-009	BU38-0011	CURIUM-245/248	7440-81-9	0.0802	PCVG	J	J	247			0.02
02E0001-009.002	Concrete	ASP-A-004	ALPHA SPEC	02E0001-009	BU38-0011	CURIUM-244	13881-15-2	-0.00291	PCVG	J	V				0.0383
02E0001-009.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-009	BU38-0011	ACTINIUM-228	7440-34-8	1.24	PCVG	J	V				0.0658
02E0001-009.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-009	BU38-0011	ANTIMONY-125	14234-35-6	0.00443	PCVG	J	V				0.0726
02E0001-009.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-009	BU38-0011	CERIUM-144	14762-78-8	0.0182	PCVG	J	V				0.13
02E0001-009.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-009	BU38-0011	COBALT-60	10198-40-0	0.00392	PCVG	J	V				0.019
02E0001-009.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-009	BU38-0011	EUROPIUM-152	14683-23-9	0.0284	PCVG	J	V				0.0579
02E0001-009.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-009	BU38-0011	EUROPIUM-154	15585-10-1	-0.0094	PCVG	J	V				0.0674
02E0001-009.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-009	BU38-0011	EUROPIUM-155	14391-16-3	0.0268	PCVG	J	V				0.162
02E0001-009.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-009	BU38-0011	POTASSIUM-40	13966-00-2	22.1	PCVG	J	V				0.016
02E0001-009.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-009	BU38-0011	PROMETHIUM-144	7440-12-2	0.00101	PCVG	J	V				0.016

UIC	DATE	SAMPLE NO.	ANALYST	METHOD	FIELD NO.	LOCATION	RESULTS	CONC.	UNIT	REMARKS	DATE	TIME
02E0001-009.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-009	BU38-0011	PROMETHIUM-148	148PM	-0.000691	PCVG	V		0.0359
02E0001-009.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-009	BU38-0011	RUTHENIUM-108	13987-48-1	0.0545	PCVG	V		0.188
02E0001-009.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-009	BU38-0011	THORIUM-234	15065-10-8	1.18	PCVG	V		0.814
02E0001-009.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-009	BU38-0011	YTRITIUM-88	13982-36-0	0.00437	PCVG	V		0.0155
02E0001-009.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-009	BU38-0011	Americium-241	14598-10-2	-0.0044	PCVG	U	V	0.0718
02E0001-009.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-009	BU38-0011	CESIUM-134	13987-70-9	-0.000338	PCVG	U	V	0.0188
02E0001-009.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-009	BU38-0011	CESIUM-137	10045-97-3	8.88	PCVG	V		0.0205
02E0001-009.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-009	BU38-0011	Lead	7439-92-1	1.31	PCVG	V		0.0379
02E0001-009.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-009	BU38-0011	Uranium-235	15117-96-1	0.0855	PCVG	U	V	0.142
02E0001-009.003	Concrete	RGA-A-005	GAMMA SPEC	02E0001-009	BU38-0011	Uranium-238	7440-61-1	1.18	PCVG	J	V	0.614
02E0001-011.001	Soil	MIS-A-004	SW9040B CHAPTER 7.	02E0001-011	BU38-0010	CORROSMITY FOR LIQUID WASTE	261.22-A-1	8.4 S.U.		1		
02E0001-011.001	Soil	MIS-A-004	SW9040B CHAPTER 7.	02E0001-011	BU38-0010	CORROSMITY FOR LIQUID WASTE	261.22-A-1	8.4 S.U.		V1		
02E0001-012.001	Soil	MIS-A-004	SW9040B CHAPTER 7.	02E0001-012	BU38-0012	CORROSMITY FOR LIQUID WASTE	261.22-A-1	8.8 S.U.		V1		
02E0001-013.001	Soil	MIS-A-004	SW9040B CHAPTER 7.	02E0001-013	BU38-0013	CORROSMITY FOR LIQUID WASTE	261.22-A-1	8.8 S.U.		V1		
02E0001-014.001	Soil	MIS-A-004	SW9040B CHAPTER 7.	02E0001-014	BU38-0014	CORROSMITY FOR LIQUID WASTE	261.22-A-1	8.7 S.U.				
02E0001-015.001	Soil	MIS-A-004	SW9040B CHAPTER 7.	02E0001-015	BU38-0015	CORROSMITY FOR LIQUID WASTE	261.22-A-1	8.8 S.U.		V1		
02E0001-016.001	Soil	MET-A-024	SW-546 6010/6010B	02E0001-016	BU38-0006	Lead	7439-92-1	7.8 MG/KG	B	V		0.23
02E0001-017.001	Soil	MET-A-024	SW-546 6010/6010B	02E0001-017	BU38-0007	Lead	7439-92-1	4.8 MG/KG	B	V		0.23
02E0001-019.001	Soil	MET-A-024	SW-546 6010/6010B	02E0001-019	BU38-0012	Lead	7439-92-1	9.4 MG/KG	B	V		0.23
02E0001-020.001	Soil	MET-A-024	SW-546 6010/6010B	02E0001-020	BU38-0013	Lead	7439-92-1	6.4 MG/KG	B	V		0.23
02E0001-021.001	Soil	MET-A-024	SW-546 6010/6010B	02E0001-021	BU38-0008	Lead	7439-92-1	12.2 MG/KG				0.22
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	UNKNOWN	TIC	1100 UG/KG	J	V	703	
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	1,2,4-Trichlorobenzene	120-82-1	350 UG/KG	U	V	703	68
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	1,2-DCE	95-50-1	350 UG/KG	U	V	703	68
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	1,3-DICHLORO BENZENE	541-73-1	350 UG/KG	U	V	703	78
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	1,4-DCE	106-46-7	350 UG/KG	U	V	703	59
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	2,4,5-Trichlorophenol	95-95-4	350 UG/KG	U	V	703	80
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	2,4,6-TRIBROMOPHENOL	118-79-6	72 %REC				
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	2,4,6-Trichlorophenol	88-06-2	350 UG/KG	U	V	703	83
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	2,4-Dichlorophenol	120-83-2	350 UG/KG	U	V	703	84
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	2,4-Dimethylphenol	105-67-9	350 UG/KG	U	V	703	96
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	2,4-Dinitrophenol	51-28-5	1700 UG/KG	U	UJ	140/141/703	530
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	2,4-Dinitrophenol	121-14-2	350 UG/KG	U	UJ	140/141/703	110
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	2,6-ONT	808-20-2	350 UG/KG	U	V	703	100
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	2-Chloronaphthalene	91-66-7	350 UG/KG	U	V	703	41
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	2-Chlorophenol	95-57-8	350 UG/KG	U	V	703	78
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	2-FLUOROBIPHENYL	321-80-8	63 %REC				
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	2-Methylnaphthalene	91-57-8	350 UG/KG	U	V	703	83
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	2-Methylphenol	95-45-7	350 UG/KG	U	V	703	82
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	2-Nitroaniline	88-74-4	1700 UG/KG	U	V	703	85
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	2-NITROPHENOL	88-75-5	350 UG/KG	U	V	703	130
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	3,3'-Dichlorobenzidine	91-94-1	1400 UG/KG	U	V	703	75
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	3-NITROANILINE	99-09-2	1700 UG/KG	U	V	703	91
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	4,6-Dinitro-2-methylphenol	534-52-1	1700 UG/KG	U	UJ	140/141/703	450
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	4-CHLORO-3-METHYLPHENOL	59-50-7	350 UG/KG	U	V	703	100
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	4-Chloroaniline	106-47-8	350 UG/KG	U	V	703	50
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	4-CHLOROPHENYL PHENYL ETHER	7005-72-3	350 UG/KG	U	V	703	76
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	4-Methylphenol	106-44-5	350 UG/KG	U	V	703	79
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	4-NITROANILINE	100-01-6	1700 UG/KG	U	V	703	68
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	4-Nitrophenol	100-02-7	1700 UG/KG	U	V	703	100
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	ACENAPHTHYLENE	208-96-6	350 UG/KG	U	V	703	38
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	Acenaphthene	83-32-9	350 UG/KG	U	V	703	46
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	Anthracene	120-12-7	350 UG/KG	U	V	703	83
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	Benzo(a)anthracene	56-55-3	350 UG/KG	U	V	703	100
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	Benzo(a)pyrene	50-32-8	350 UG/KG	U	V	703	42
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	Benzo(b)fluoranthene	205-99-2	350 UG/KG	U	V	703	110
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	BENZO(g,h)PHTHYLENE	191-24-2	350 UG/KG	U	V	703	75
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	BENZO(k)FLUORANTHENE	207-08-9	350 UG/KG	U	V	703	99
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	Benzoic acid	65-85-0	1700 UG/KG	U	V	703	810
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	Benzyl alcohol	100-51-8	350 UG/KG	U	V	703	82
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	Bis(2-chloroethyl)ether	111-44-4	350 UG/KG	U	V	703	52
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	BIS(2-CHLOROETHOXY)METHANE	111-91-1	350 UG/KG	U	V	703	79
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	Bis(2-chloroisopropyl)ether	39638-32-9	350 UG/KG	U	V	703	74
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	Bis(2-ethoxyethyl)phthalate	117-81-7	350 UG/KG	U	V	703	74
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	Butyl benzylphthalate	85-68-7	350 UG/KG	U	V	703	36
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	Chrysene	218-01-9	350 UG/KG	U	V	703	57
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	Di-n-BUTYL PHTHALATE	84-74-2	350 UG/KG	U	V	703	81
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	Di-n-octylphthalate	117-84-0	350 UG/KG	U	V	703	38
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	DiBenz(a,h)anthracene	53-70-3	350 UG/KG	U	V	703	30
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	Dibenzofuran	132-64-9	350 UG/KG	U	V	703	88
02E0001-022.001	Soil	SVO-A-007	SW-546 8270B	02E0001-022	BU38-0009	Diethyl phthalate	84-66-2	710 UG/KG	U	V	703	97

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4

UBC 123
Analytical Data

DATE	TIME	LOCATION	ANALYST	INSTRUMENT	CONCENTRATION	UNIT	REMARKS	DATE	TIME	LOCATION	ANALYST	INSTRUMENT	CONCENTRATION	UNIT	REMARKS
02E0001-025.001	Soil	MET-A-023	SW-846 8010/8010B	02E0001-025	123 SLAB REMOVAL GRAB SMPL	Silver	7440-22-4	901	%REC						
02E0001-025.001	Soil	MET-A-023	SW-846 8010/8010B	02E0001-025	123 SLAB REMOVAL GRAB SMPL	Silver	7440-22-4	94	%REC						
02E0001-025.001	Soil	MET-A-023	SW-846 8010/8010B	02E0001-025	123 SLAB REMOVAL GRAB SMPL	SODIUM	7440-23-5	100	%REC						
02E0001-025.001	Soil	MET-A-023	SW-846 8010/8010B	02E0001-025	123 SLAB REMOVAL GRAB SMPL	SODIUM	7440-23-5	377	MG/KG	U	V				377
02E0001-025.001	Soil	MET-A-023	SW-846 8010/8010B	02E0001-025	123 SLAB REMOVAL GRAB SMPL	Strontium	7440-24-6	94	MG/KG	B	V				0.039
02E0001-025.001	Soil	MET-A-023	SW-846 8010/8010B	02E0001-025	123 SLAB REMOVAL GRAB SMPL	Strontium	7440-24-6	96	%REC						
02E0001-025.001	Soil	MET-A-023	SW-846 8010/8010B	02E0001-025	123 SLAB REMOVAL GRAB SMPL	Strontium	7440-24-6	107	%REC						
02E0001-025.001	Soil	MET-A-023	SW-846 8010/8010B	02E0001-025	123 SLAB REMOVAL GRAB SMPL	THALLIUM	7440-28-0	0.71	MG/KG	B	UJ	107			0.44
02E0001-025.001	Soil	MET-A-023	SW-846 8010/8010B	02E0001-025	123 SLAB REMOVAL GRAB SMPL	THALLIUM	7440-28-0	89	%REC						
02E0001-025.001	Soil	MET-A-023	SW-846 8010/8010B	02E0001-025	123 SLAB REMOVAL GRAB SMPL	THALLIUM	7440-28-0	91	%REC						
02E0001-025.001	Soil	MET-A-023	SW-846 8010/8010B	02E0001-025	123 SLAB REMOVAL GRAB SMPL	Tin	7440-31-5	1.8	MG/KG	B	UJ	107			0.47
02E0001-025.001	Soil	MET-A-023	SW-846 8010/8010B	02E0001-025	123 SLAB REMOVAL GRAB SMPL	Tin	7440-31-5	91	%REC						
02E0001-025.001	Soil	MET-A-023	SW-846 8010/8010B	02E0001-025	123 SLAB REMOVAL GRAB SMPL	Tin	7440-31-5	92	%REC						
02E0001-025.001	Soil	MET-A-023	SW-846 8010/8010B	02E0001-025	123 SLAB REMOVAL GRAB SMPL	Titanium	7440-32-6	89	%REC						
02E0001-025.001	Soil	MET-A-023	SW-846 8010/8010B	02E0001-025	123 SLAB REMOVAL GRAB SMPL	Titanium	7440-32-6	96	%REC						
02E0001-025.001	Soil	MET-A-023	SW-846 8010/8010B	02E0001-025	123 SLAB REMOVAL GRAB SMPL	Titanium	7440-32-6	322	MG/KG		V				0.17
02E0001-025.001	Soil	MET-A-023	SW-846 8010/8010B	02E0001-025	123 SLAB REMOVAL GRAB SMPL	Vanadium	7440-62-2	13.1	MG/KG		V				0.55
02E0001-025.001	Soil	MET-A-023	SW-846 8010/8010B	02E0001-025	123 SLAB REMOVAL GRAB SMPL	Vanadium	7440-62-2	99	%REC						
02E0001-025.001	Soil	MET-A-023	SW-846 8010/8010B	02E0001-025	123 SLAB REMOVAL GRAB SMPL	Vanadium	7440-62-2	111	%REC	N					
02E0001-025.001	Soil	MET-A-023	SW-846 8010/8010B	02E0001-025	123 SLAB REMOVAL GRAB SMPL	Zinc	7440-66-6	30.3	MG/KG		V				1.4
02E0001-025.001	Soil	MET-A-023	SW-846 8010/8010B	02E0001-025	123 SLAB REMOVAL GRAB SMPL	Zinc	7440-66-6	89	%REC						
02E0001-025.001	Soil	MET-A-023	SW-846 8010/8010B	02E0001-025	123 SLAB REMOVAL GRAB SMPL	Zinc	7440-66-6	94	%REC						
02E0002-001.001	Soil	RC108019	HPGe	02E0002-001	123 PAD SOIL SAMPLE	AC-228	7440-34-8	1.23	pCi/g						0
02E0002-001.001	Soil	RC108019	HPGe	02E0002-001	123 PAD SOIL SAMPLE	BI-212		1.8	pCi/g						0
02E0002-001.001	Soil	RC108019	HPGe	02E0002-001	123 PAD SOIL SAMPLE	BI-214		0.599	pCi/g						0
02E0002-001.001	Soil	RC108019	HPGe	02E0002-001	123 PAD SOIL SAMPLE	K-40	13966-0-2	21.5	pCi/g						0
02E0002-001.001	Soil	RC108019	HPGe	02E0002-001	123 PAD SOIL SAMPLE	PA-234		0	pCi/g						0
02E0002-001.001	Soil	RC108019	HPGe	02E0002-001	123 PAD SOIL SAMPLE	PA-234M		0	pCi/g						0
02E0002-001.001	Soil	RC108019	HPGe	02E0002-001	123 PAD SOIL SAMPLE	PB-212		1.04	pCi/g						0
02E0002-001.001	Soil	RC108019	HPGe	02E0002-001	123 PAD SOIL SAMPLE	PB-214		0.784	pCi/g						0
02E0002-001.001	Soil	RC108019	HPGe	02E0002-001	123 PAD SOIL SAMPLE	PO-210	13981-52-7	0	pCi/g						0
02E0002-001.001	Soil	RC108019	HPGe	02E0002-001	123 PAD SOIL SAMPLE	RA-228	10031-23-9	2.03	pCi/g						0
02E0002-001.001	Soil	RC108019	HPGe	02E0002-001	123 PAD SOIL SAMPLE	Th-231		0	pCi/g						0
02E0002-001.001	Soil	RC108019	HPGe	02E0002-001	123 PAD SOIL SAMPLE	TL-208		0.482	pCi/g						0
02E0002-001.001	Soil	RC108019	HPGe	02E0002-001	123 PAD SOIL SAMPLE	Americium-241	14596-10-2	0	pCi/g						4
02E0002-001.001	Soil	RC108019	HPGe	02E0002-001	123 PAD SOIL SAMPLE	CESIUM-134	13967-70-9	1.99	pCi/g						0
02E0002-001.001	Soil	RC108019	HPGe	02E0002-001	123 PAD SOIL SAMPLE	THORIUM-230	14289-63-7	0	pCi/g						0
02E0002-001.001	Soil	RC108019	HPGe	02E0002-001	123 PAD SOIL SAMPLE	Uranium-235	15117-96-1	0	pCi/g						1
02E0002-001.001	Soil	RC108019	HPGe	02E0002-001	123 PAD SOIL SAMPLE	Uranium-238	7440-61-1	0	pCi/g						8
02E0003-001.002	Soil	ASP-A-004	ALPHA SPEC	02E0003-001	BU38-0005	Americium-241	14596-10-2	0.0496	PCVG	J					0.0368
02E0003-001.002	Soil	ASP-A-004	ALPHA SPEC	02E0003-001	BU38-0005	Plutonium-239/240	10-12-8	-0.0115	PCVG	U					0.111
02E0003-001.002	Soil	ASP-A-004	ALPHA SPEC	02E0003-001	BU38-0005	Uranium-234	11-08-5	0.521	PCVG	J					0.109
02E0003-001.002	Soil	ASP-A-004	ALPHA SPEC	02E0003-001	BU38-0005	Uranium-235	15117-96-1	0.0616	PCVG	J					0.0537
02E0003-001.002	Soil	ASP-A-004	ALPHA SPEC	02E0003-001	BU38-0005	Uranium-238	7440-61-1	0.892	PCVG	J					0.0909
02E0003-002.002	Soil	ASP-A-004	ALPHA SPEC	02E0003-002	BU38-0006	Americium-241	14596-10-2	0.019	PCVG	J					0.086
02E0003-002.002	Soil	ASP-A-004	ALPHA SPEC	02E0003-002	BU38-0006	Plutonium-239/240	10-12-8	-0.0212	PCVG	U					0.167
02E0003-002.002	Soil	ASP-A-004	ALPHA SPEC	02E0003-002	BU38-0006	Uranium-234	11-08-5	0.498	PCVG	J					0.107
02E0003-002.002	Soil	ASP-A-004	ALPHA SPEC	02E0003-002	BU38-0006	Uranium-235	15117-96-1	-0.00165	PCVG	U					0.101
02E0003-002.002	Soil	ASP-A-004	ALPHA SPEC	02E0003-002	BU38-0006	Uranium-238	7440-61-1	0.578	PCVG	J					0.0713
02E0003-003.002	Soil	ASP-A-004	ALPHA SPEC	02E0003-003	BU38-0007	Americium-241	14596-10-2	0.0185	PCVG	U					0.0685
02E0003-003.002	Soil	ASP-A-004	ALPHA SPEC	02E0003-003	BU38-0007	Plutonium-239/240	10-12-8	0.0425	PCVG	U					0.105
02E0003-003.002	Soil	ASP-A-004	ALPHA SPEC	02E0003-003	BU38-0007	Uranium-234	11-08-5	0.536	PCVG	J					0.139
02E0003-003.002	Soil	ASP-A-004	ALPHA SPEC	02E0003-003	BU38-0007	Uranium-235	15117-96-1	-0.00154	PCVG	U					0.0947
02E0003-003.002	Soil	ASP-A-004	ALPHA SPEC	02E0003-003	BU38-0007	Uranium-238	7440-61-1	0.508	PCVG	J					0.0752
02E0003-004.002	Soil	ASP-A-004	ALPHA SPEC	02E0003-004	BU38-0008	Americium-241	14596-10-2	0.0127	PCVG	U					0.027
02E0003-004.002	Soil	ASP-A-004	ALPHA SPEC	02E0003-004	BU38-0008	Plutonium-239/240	10-12-8	-0.0129	PCVG	U					0.124
02E0003-004.002	Soil	ASP-A-004	ALPHA SPEC	02E0003-004	BU38-0008	Uranium-234	11-08-5	0.489	PCVG	J					0.0846
02E0003-004.002	Soil	ASP-A-004	ALPHA SPEC	02E0003-004	BU38-0008	Uranium-235	15117-96-1	0.0324	PCVG	U					0.0687
02E0003-004.002	Soil	ASP-A-004	ALPHA SPEC	02E0003-004	BU38-0008	Uranium-238	7440-61-1	0.496	PCVG	J					0.0685
02E0008-001.002	Soil	ASP-A-004	ALPHA SPEC	02E0008-001	Northern Process Line	Americium-241	14596-10-2	0.0277	PCVG	U					0.0829
02E0008-001.002	Soil	ASP-A-004	ALPHA SPEC	02E0008-001	Northern Process Line	Americium-241	14596-10-2	0.0762	PCVG	U					0.1
02E0008-001.002	Soil	ASP-A-004	ALPHA SPEC	02E0008-001	Northern Process Line	Plutonium-239/240	10-12-8	0.101	PCVG	U					0.144
02E0008-001.002	Soil	ASP-A-004	ALPHA SPEC	02E0008-001	Northern Process Line	Plutonium-239/240	10-12-8	0.105	PCVG	J					0.0526
02E0008-001.002	Soil	ASP-A-004	ALPHA SPEC	02E0008-001	Northern Process Line	Uranium-234	11-08-5	0.388	PCVG	J					0.144
02E0008-001.002	Soil	ASP-A-004	ALPHA SPEC	02E0008-001	Northern Process Line	Uranium-234	11-08-5	0.453	PCVG	J					0.147
02E0008-001.002	Soil	ASP-A-004	ALPHA SPEC	02E0008-001	Northern Process Line	Uranium-235	15117-96-1	-0.00565	PCVG	U					0.144
02E0008-001.002	Soil	ASP-A-004	ALPHA SPEC	02E0008-001	Northern Process Line	Uranium-235	15117-96-1	0.0281	PCVG	U					0.126
02E0008-001.002	Soil	ASP-A-004	ALPHA SPEC	02E0008-001	Northern Process Line	Uranium-238	7440-61-1	0.332	PCVG	J					0.144
02E0008-001.002	Soil	ASP-A-004	ALPHA SPEC	02E0008-001	Northern Process Line	Uranium-238	7440-61-1	0.744	PCVG	J					0.0822
02E0008-001.003	Soil	RC108019	HPGe	02E0008-001	Northern Process Line	AC-228	7440-34-8	1.68	pCi/g						0
02E0008-001.003	Soil	RC108019	HPGe	02E0008-001	Northern Process Line	BI-212		2.15	pCi/g						0

UBS 123
Analytical Data

PROJECT	DATE	TIME	ANALYST	FIELD NO.	LOCATION	ANALYTE	CAS NO.	RESULT	UNIT	QUAL	QUAN	REMARKS
02E0008-001.003	Soil	RC108019	HPGe	02E0008-001	Northern Process Line	BI-214		0.812	pCi/g			0
02E0008-001.003	Soil	RC108019	HPGe	02E0008-001	Northern Process Line	CO-57	13981-50-5	0.128	pCi/g			0
02E0008-001.003	Soil	RC108019	HPGe	02E0008-001	Northern Process Line	K-40	13968-0-2	13.9	pCi/g			0
02E0008-001.003	Soil	RC108019	HPGe	02E0008-001	Northern Process Line	PA-234		0	pCi/g			0
02E0008-001.003	Soil	RC108019	HPGe	02E0008-001	Northern Process Line	PA-234M		0	pCi/g			0
02E0008-001.003	Soil	RC108019	HPGe	02E0008-001	Northern Process Line	PB-212		1.89	pCi/g			0
02E0008-001.003	Soil	RC108019	HPGe	02E0008-001	Northern Process Line	PB-214		0.973	pCi/g			0
02E0008-001.003	Soil	RC108019	HPGe	02E0008-001	Northern Process Line	PO-210	13981-52-7	0	pCi/g			0
02E0008-001.003	Soil	RC108019	HPGe	02E0008-001	Northern Process Line	RA-226	10031-23-9	0	pCi/g			0
02E0008-001.003	Soil	RC108019	HPGe	02E0008-001	Northern Process Line	Th-231		0	pCi/g			0
02E0008-001.003	Soil	RC108019	HPGe	02E0008-001	Northern Process Line	TL-208		0.811	pCi/g			0
02E0008-001.003	Soil	RC108019	HPGe	02E0008-001	Northern Process Line	Americium-241	14596-10-2	0	pCi/g			4
02E0008-001.003	Soil	RC108019	HPGe	02E0008-001	Northern Process Line	THORIUM-230	14269-63-7	0	pCi/g			0
02E0008-001.003	Soil	RC108019	HPGe	02E0008-001	Northern Process Line	Uranium-235	15117-96-1	0.148	pCi/g			1
02E0008-001.003	Soil	RC108019	HPGe	02E0008-001	Northern Process Line	Uranium-238	7440-61-1	0	pCi/g			8
02E0008-002.001	Soil	RC108019	HPGe	02E0008-002	Northern Point	AC-228	7440-34-8	1.2	pCi/g			0
02E0008-002.001	Soil	RC108019	HPGe	02E0008-002	Northern Point	BI-212		0	pCi/g			0
02E0008-002.001	Soil	RC108019	HPGe	02E0008-002	Northern Point	BI-214		0.808	pCi/g			0
02E0008-002.001	Soil	RC108019	HPGe	02E0008-002	Northern Point	K-40	13968-0-2	26.3	pCi/g			0
02E0008-002.001	Soil	RC108019	HPGe	02E0008-002	Northern Point	PA-234		0	pCi/g			0
02E0008-002.001	Soil	RC108019	HPGe	02E0008-002	Northern Point	PA-234M		0	pCi/g			0
02E0008-002.001	Soil	RC108019	HPGe	02E0008-002	Northern Point	PB-212		0.955	pCi/g			0
02E0008-002.001	Soil	RC108019	HPGe	02E0008-002	Northern Point	PB-214		1.01	pCi/g			0
02E0008-002.001	Soil	RC108019	HPGe	02E0008-002	Northern Point	PO-210	13981-52-7	0	pCi/g			0
02E0008-002.001	Soil	RC108019	HPGe	02E0008-002	Northern Point	RA-226	10031-23-9	3.2	pCi/g			0
02E0008-002.001	Soil	RC108019	HPGe	02E0008-002	Northern Point	Th-231		0	pCi/g			0
02E0008-002.001	Soil	RC108019	HPGe	02E0008-002	Northern Point	TL-208		0.487	pCi/g			0
02E0008-002.001	Soil	RC108019	HPGe	02E0008-002	Northern Point	Americium-241	14596-10-2	0	pCi/g			4
02E0008-002.001	Soil	RC108019	HPGe	02E0008-002	Northern Point	THORIUM-230	14269-63-7	0	pCi/g			0
02E0008-002.001	Soil	RC108019	HPGe	02E0008-002	Northern Point	Uranium-235	15117-96-1	0	pCi/g			1
02E0008-002.001	Soil	RC108019	HPGe	02E0008-002	Northern Point	Uranium-238	7440-61-1	0	pCi/g			8
02E0008-002.002	Soil	ASP-A-004	ALPHA SPEC	02E0008-002	Northern Point	Americium-241	14596-10-2	0.0185	PCIVG	U		0.0301
02E0008-002.002	Soil	ASP-A-004	ALPHA SPEC	02E0008-002	Northern Point	Plutonium-239/240	10-12-8	0.0431	PCIVG	U		0.257
02E0008-002.002	Soil	ASP-A-004	ALPHA SPEC	02E0008-002	Northern Point	Uranium-234	11-08-5	0.809	PCIVG	J		0.127
02E0008-002.002	Soil	ASP-A-004	ALPHA SPEC	02E0008-002	Northern Point	Uranium-235	15117-96-1	0.0744	PCIVG	J		0.0446
02E0008-002.002	Soil	ASP-A-004	ALPHA SPEC	02E0008-002	Northern Point	Uranium-238	7440-61-1	1.01	PCIVG	J		0.0445
02E0008-003.001	Soil	RC108019	HPGe	02E0008-003	Mid-Point	AC-228	7440-34-8	1.39	pCi/g			0
02E0008-003.001	Soil	RC108019	HPGe	02E0008-003	Mid-Point	BI-212		1.87	pCi/g			0
02E0008-003.001	Soil	RC108019	HPGe	02E0008-003	Mid-Point	BI-214		0.732	pCi/g			0
02E0008-003.001	Soil	RC108019	HPGe	02E0008-003	Mid-Point	K-40	13968-0-2	18.4	pCi/g			0
02E0008-003.001	Soil	RC108019	HPGe	02E0008-003	Mid-Point	PA-234		0	pCi/g			0
02E0008-003.001	Soil	RC108019	HPGe	02E0008-003	Mid-Point	PA-234M		0	pCi/g			0
02E0008-003.001	Soil	RC108019	HPGe	02E0008-003	Mid-Point	PB-212		0.902	pCi/g			0
02E0008-003.001	Soil	RC108019	HPGe	02E0008-003	Mid-Point	PB-214		1.01	pCi/g			0
02E0008-003.001	Soil	RC108019	HPGe	02E0008-003	Mid-Point	PO-210	13981-52-7	0	pCi/g			0
02E0008-003.001	Soil	RC108019	HPGe	02E0008-003	Mid-Point	RA-226	10031-23-9	0	pCi/g			0
02E0008-003.001	Soil	RC108019	HPGe	02E0008-003	Mid-Point	Th-231		0	pCi/g			0
02E0008-003.001	Soil	RC108019	HPGe	02E0008-003	Mid-Point	TL-208		0.338	pCi/g			0
02E0008-003.001	Soil	RC108019	HPGe	02E0008-003	Mid-Point	Americium-241	14596-10-2	0	pCi/g			4
02E0008-003.001	Soil	RC108019	HPGe	02E0008-003	Mid-Point	THORIUM-230	14269-63-7	0	pCi/g			0
02E0008-003.001	Soil	RC108019	HPGe	02E0008-003	Mid-Point	Uranium-235	15117-96-1	0.162	pCi/g			1
02E0008-003.001	Soil	RC108019	HPGe	02E0008-003	Mid-Point	Uranium-238	7440-61-1	0	pCi/g			8
02E0008-003.002	Soil	ASP-A-004	ALPHA SPEC	02E0008-003	Mid-Point	Americium-241	14596-10-2	0.000501	PCIVG	U		0.0455
02E0008-003.002	Soil	ASP-A-004	ALPHA SPEC	02E0008-003	Mid-Point	Plutonium-239/240	10-12-8	-0.047	PCIVG	U		0.178
02E0008-003.002	Soil	ASP-A-004	ALPHA SPEC	02E0008-003	Mid-Point	Uranium-234	11-08-5	0.808	PCIVG	J		0.0745
02E0008-003.002	Soil	ASP-A-004	ALPHA SPEC	02E0008-003	Mid-Point	Uranium-235	15117-96-1	0.0491	PCIVG	U		0.0923
02E0008-003.002	Soil	ASP-A-004	ALPHA SPEC	02E0008-003	Mid-Point	Uranium-238	7440-61-1	0.814	PCIVG	J		0.106
02E0008-004.001	Soil	RC108019	HPGe	02E0008-004	Southern Point	AC-228	7440-34-8	1.42	pCi/g			0
02E0008-004.001	Soil	RC108019	HPGe	02E0008-004	Southern Point	BI-212		1.12	pCi/g			0
02E0008-004.001	Soil	RC108019	HPGe	02E0008-004	Southern Point	BI-214		0.886	pCi/g			0
02E0008-004.001	Soil	RC108019	HPGe	02E0008-004	Southern Point	K-40	13968-0-2	20.1	pCi/g			0
02E0008-004.001	Soil	RC108019	HPGe	02E0008-004	Southern Point	PA-234		0	pCi/g			0
02E0008-004.001	Soil	RC108019	HPGe	02E0008-004	Southern Point	PA-234M		0	pCi/g			0
02E0008-004.001	Soil	RC108019	HPGe	02E0008-004	Southern Point	PB-212		1.21	pCi/g			0
02E0008-004.001	Soil	RC108019	HPGe	02E0008-004	Southern Point	PB-214		0.743	pCi/g			0
02E0008-004.001	Soil	RC108019	HPGe	02E0008-004	Southern Point	PO-210	13981-52-7	0	pCi/g			0
02E0008-004.001	Soil	RC108019	HPGe	02E0008-004	Southern Point	RA-226	10031-23-9	0	pCi/g			0
02E0008-004.001	Soil	RC108019	HPGe	02E0008-004	Southern Point	Th-231		0	pCi/g			0
02E0008-004.001	Soil	RC108019	HPGe	02E0008-004	Southern Point	TL-208		0.447	pCi/g			0
02E0008-004.001	Soil	RC108019	HPGe	02E0008-004	Southern Point	Americium-241	14596-10-2	0	pCi/g			4
02E0008-004.001	Soil	RC108019	HPGe	02E0008-004	Southern Point	THORIUM-230	14269-63-7	0	pCi/g			0

[illegible]

8

UBC 123
Analytical Data

DATE	TIME	LOCATION	DEPTH	ANALYST	INSTRUMENT	ISOTOPE	CONCENTRATION	UNIT	REMARKS	DATE	TIME	LOCATION	DEPTH	ANALYST	INSTRUMENT	ISOTOPE	CONCENTRATION	UNIT	REMARKS
02E0008-011.001		Soil	RC108019	HPGe	02E0008-011	Eastern Process Line	Bi-214		0.581	pCi/g									0
02E0008-011.001		Soil	RC108019	HPGe	02E0008-011	Eastern Process Line	K-40		11	pCi/g									0
02E0008-011.001		Soil	RC108019	HPGe	02E0008-011	Eastern Process Line	PA-234		0	pCi/g									0
02E0008-011.001		Soil	RC108019	HPGe	02E0008-011	Eastern Process Line	PA-234M		0	pCi/g									0
02E0008-011.001		Soil	RC108019	HPGe	02E0008-011	Eastern Process Line	PB-212		0.83	pCi/g									0
02E0008-011.001		Soil	RC108019	HPGe	02E0008-011	Eastern Process Line	PB-214		0.501	pCi/g									0
02E0008-011.001		Soil	RC108019	HPGe	02E0008-011	Eastern Process Line	PO-210		13981-52-7	0	pCi/g								0
02E0008-011.001		Soil	RC108019	HPGe	02E0008-011	Eastern Process Line	RA-226		10031-23-9	3.97	pCi/g								0
02E0008-011.001		Soil	RC108019	HPGe	02E0008-011	Eastern Process Line	Th-231		0	pCi/g									0
02E0008-011.001		Soil	RC108019	HPGe	02E0008-011	Eastern Process Line	TL-208		0.288	pCi/g									0
02E0008-011.001		Soil	RC108019	HPGe	02E0008-011	Eastern Process Line	Americium-241		14598-10-2	0	pCi/g								0
02E0008-011.001		Soil	RC108019	HPGe	02E0008-011	Eastern Process Line	CESURIUM-134		13967-70-9	0.0579	pCi/g								0
02E0008-011.001		Soil	RC108019	HPGe	02E0008-011	Eastern Process Line	THORIUM-230		14269-63-7	0	pCi/g								0
02E0008-011.001		Soil	RC108019	HPGe	02E0008-011	Eastern Process Line	Uranium-235		15117-96-1	0	pCi/g								0
02E0008-011.001		Soil	RC108019	HPGe	02E0008-011	Eastern Process Line	Uranium-238		7440-81-1	2.47	pCi/g								0
02E0008-011.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-011	Eastern Process Line	Americium-241		14598-10-2	0.131	PCVG	J							0.0491
02E0008-011.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-011	Eastern Process Line	Plutonium-239/240		10-12-8	0.0582	PCVG	J							0.0444
02E0008-011.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-011	Eastern Process Line	Uranium-234		11-08-5	0.85	PCVG	J							0.0834
02E0008-011.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-011	Eastern Process Line	Uranium-235		15117-96-1	0.0403	PCVG	J							0.0403
02E0008-011.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-011	Eastern Process Line	Uranium-238		7440-81-1	0.898	PCVG	J							0.0402
02E0008-014.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-014	Western Pile	Americium-241		14598-10-2	0.0383	PCVG	J							0.0321
02E0008-014.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-014	Western Pile	Plutonium-239/240		10-12-8	-0.035	PCVG	U							0.185
02E0008-014.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-014	Western Pile	Uranium-234		11-08-5	0.945	PCVG	J							0.0575
02E0008-014.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-014	Western Pile	Uranium-235		15117-96-1	0.0355	PCVG	U							0.0576
02E0008-014.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-014	Western Pile	Uranium-238		7440-81-1	0.805	PCVG	J							0.0575
02E0008-015.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-015	Western Pile	Americium-241		14598-10-2	0.0599	PCVG	U							0.0724
02E0008-015.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-015	Western Pile	Plutonium-239/240		10-12-8	0.0481	PCVG	J							0.102
02E0008-015.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-015	Western Pile	Uranium-234		11-08-5	0.85	PCVG	J							0.12
02E0008-015.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-015	Western Pile	Uranium-235		15117-96-1	0.0866	PCVG	U							0.0963
02E0008-015.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-015	Western Pile	Uranium-238		7440-81-1	0.851	PCVG	J							0.0902
02E0008-016.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-016	Middle Pile	Americium-241		14598-10-2	0.0163	PCVG	U							0.0307
02E0008-016.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-016	Middle Pile	Plutonium-239/240		10-12-8	0.0186	PCVG	U							0.127
02E0008-016.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-016	Middle Pile	Uranium-234		11-08-5	0.86	PCVG	J							0.0574
02E0008-016.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-016	Middle Pile	Uranium-235		15117-96-1	0.0183	PCVG	U							0.0575
02E0008-016.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-016	Middle Pile	Uranium-238		7440-81-1	0.607	PCVG	J							0.0688
02E0008-017.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-017	Eastern Pile	Americium-241		14598-10-2	0.0809	PCVG	J							0.0581
02E0008-017.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-017	Eastern Pile	Plutonium-239/240		10-12-8	0.035	PCVG	U							0.117
02E0008-017.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-017	Eastern Pile	Uranium-234		11-08-5	0.938	PCVG	J							0.067
02E0008-017.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-017	Eastern Pile	Uranium-235		15117-96-1	0.00194	PCVG	U							0.0694
02E0008-017.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-017	Eastern Pile	Uranium-238		7440-81-1	0.877	PCVG	J							0.0756
02E0008-018.001		Soil	RC108019	HPGe	02E0008-018	B123 Metal Manhole	AC-228		7440-34-6	3.78	pCi/g								0
02E0008-018.001		Soil	RC108019	HPGe	02E0008-018	B123 Metal Manhole	Bi-212			3.38	pCi/g								0
02E0008-018.001		Soil	RC108019	HPGe	02E0008-018	B123 Metal Manhole	Bi-214			0.845	pCi/g								0
02E0008-018.001		Soil	RC108019	HPGe	02E0008-018	B123 Metal Manhole	K-40		13968-0-2	23.6	pCi/g								0
02E0008-018.001		Soil	RC108019	HPGe	02E0008-018	B123 Metal Manhole	PA-234			0	pCi/g								0
02E0008-018.001		Soil	RC108019	HPGe	02E0008-018	B123 Metal Manhole	PA-234M			0	pCi/g								0
02E0008-018.001		Soil	RC108019	HPGe	02E0008-018	B123 Metal Manhole	PB-212			2.9	pCi/g								0
02E0008-018.001		Soil	RC108019	HPGe	02E0008-018	B123 Metal Manhole	PB-214			1.25	pCi/g								0
02E0008-018.001		Soil	RC108019	HPGe	02E0008-018	B123 Metal Manhole	PO-210		13981-52-7	0	pCi/g								0
02E0008-018.001		Soil	RC108019	HPGe	02E0008-018	B123 Metal Manhole	RA-226		10031-23-9	0	pCi/g								0
02E0008-018.001		Soil	RC108019	HPGe	02E0008-018	B123 Metal Manhole	Th-231			0	pCi/g								0
02E0008-018.001		Soil	RC108019	HPGe	02E0008-018	B123 Metal Manhole	TL-208			0.832	pCi/g								0
02E0008-018.001		Soil	RC108019	HPGe	02E0008-018	B123 Metal Manhole	Americium-241		14598-10-2	0	pCi/g								0
02E0008-018.001		Soil	RC108019	HPGe	02E0008-018	B123 Metal Manhole	THORIUM-230		14269-63-7	0	pCi/g								0
02E0008-018.001		Soil	RC108019	HPGe	02E0008-018	B123 Metal Manhole	Uranium-235		15117-96-1	0	pCi/g								0
02E0008-018.001		Soil	RC108019	HPGe	02E0008-018	B123 Metal Manhole	Uranium-238		7440-81-1	0	pCi/g								0
02E0008-018.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-018	B123 Metal Manhole	Americium-241		14598-10-2	0.0492	PCVG	U							0.122
02E0008-018.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-018	B123 Metal Manhole	Plutonium-239/240		10-12-8	0.0485	PCVG	U							0.103
02E0008-018.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-018	B123 Metal Manhole	Uranium-234		11-08-5	0.817	PCVG	J							0.181
02E0008-018.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-018	B123 Metal Manhole	Uranium-235		15117-96-1	0.0858	PCVG	U							0.169
02E0008-018.002		Soil	ASP-A-004	ALPHA SPEC	02E0008-018	B123 Metal Manhole	Uranium-238		7440-81-1	0.535	PCVG	J							0.154
02E0010-004.001		Soil	ASP-A-004	ALPHA SPEC	02E0010-004	Source Pit	Americium-241		14598-10-2	0.0521	PCVG	U							0.0995
02E0010-004.001		Soil	ASP-A-004	ALPHA SPEC	02E0010-004	Source Pit	Plutonium-239/240		10-12-8	0.0234	PCVG	U							0.127
02E0010-004.001		Soil	ASP-A-004	ALPHA SPEC	02E0010-004	Source Pit	Uranium-234		11-08-5	0.434	PCVG	J							0.115
02E0010-004.001		Soil	ASP-A-004	ALPHA SPEC	02E0010-004	Source Pit	Uranium-235		15117-96-1	0.051	PCVG	U							0.0976
02E0010-004.001		Soil	ASP-A-004	ALPHA SPEC	02E0010-004	Source Pit	Uranium-238		7440-81-1	0.309	PCVG	J							0.0973
02E0010-004.002		Soil	RC108019	HPGe	02E0010-004	Source Pit	AC-228		7440-34-6	1.79	pCi/g								0
02E0010-004.002		Soil	RC108019	HPGe	02E0010-004	Source Pit	Bi-212			0	pCi/g								0
02E0010-004.002		Soil	RC108019	HPGe	02E0010-004	Source Pit	Bi-214			0.753	pCi/g								0
02E0010-004.002		Soil	RC108019	HPGe	02E0010-004	Source Pit	K-40		13968-0-2	20.9	pCi/g								0
02E0010-004.002		Soil	RC108019	HPGe	02E0010-004	Source Pit	PA-234			0	pCi/g								0

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UBC 123
Analytical Data

DATE	TIME	LOCATION	ANALYTE	CONC	UNIT	REMARKS
02E0010-011.002	Soil	URS10819 HPGe	02E0010-011 BU39-0004 Uranium-235	15117-96-1	0.203 pCi/g	0
02E0010-011.002	Soil	URS10819 HPGe	02E0010-011 BU39-0004 Uranium-238	7440-81-1	1.68 pCi/g	0
02E0010-013.002	Soil	URS10819 HPGe	02E0010-013 BU39-0001 AC-228	7440-34-8	1.67 pCi/g	0
02E0010-013.002	Soil	URS10819 HPGe	02E0010-013 BU39-0001 BI-212	14913-49-6	1.6 pCi/g	0
02E0010-013.002	Soil	URS10819 HPGe	02E0010-013 BU39-0001 BI-214	14733-03-0	0.662 pCi/g	0
02E0010-013.002	Soil	URS10819 HPGe	02E0010-013 BU39-0001 K-40	13968-0-2	20.5 pCi/g	0
02E0010-013.002	Soil	URS10819 HPGe	02E0010-013 BU39-0001 PA-234	15100-28-4	0 pCi/g	0
02E0010-013.002	Soil	URS10819 HPGe	02E0010-013 BU39-0001 PA-234M	15100-28-4m	3.44 pCi/g	0
02E0010-013.002	Soil	URS10819 HPGe	02E0010-013 BU39-0001 PB-212	15092-94-1	1.83 pCi/g	0
02E0010-013.002	Soil	URS10819 HPGe	02E0010-013 BU39-0001 PB-214	15067-28-4	0.782 pCi/g	0
02E0010-013.002	Soil	URS10819 HPGe	02E0010-013 BU39-0001 PO-210	13981-52-7	0 pCi/g	0
02E0010-013.002	Soil	URS10819 HPGe	02E0010-013 BU39-0001 RA-226	10031-23-9	2.24 pCi/g	0
02E0010-013.002	Soil	URS10819 HPGe	02E0010-013 BU39-0001 Th-231	14932-40-2	0 pCi/g	0
02E0010-013.002	Soil	URS10819 HPGe	02E0010-013 BU39-0001 TL-208	14913-50-9	0.564 pCi/g	0
02E0010-013.002	Soil	URS10819 HPGe	02E0010-013 BU39-0001 Americium-241	14596-10-2	0 pCi/g	0
02E0010-013.002	Soil	URS10819 HPGe	02E0010-013 BU39-0001 CESIUM-134	13967-70-9	0 pCi/g	0
02E0010-013.002	Soil	URS10819 HPGe	02E0010-013 BU39-0001 THORIUM-230	14269-63-7	0 pCi/g	0
02E0010-013.002	Soil	URS10819 HPGe	02E0010-013 BU39-0001 Uranium-235	15117-96-1	0 pCi/g	0
02E0010-013.002	Soil	URS10819 HPGe	02E0010-013 BU39-0001 Uranium-238	7440-81-1	3.03 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench AC-228	7440-34-8	1.1 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench BI-212	14913-49-6	0 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench BI-214	14733-03-0	0.442 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench K-40	13968-0-2	13.1 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench PA-234	15100-28-4	0 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench PA-234M	15100-28-4m	0 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench PB-212	15092-94-1	0.952 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench PB-214	15067-28-4	0.491 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench PO-210	13981-52-7	0 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench RA-226	10031-23-9	3.71 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench Th-231	14932-40-2	0 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench TL-208	14913-50-9	0.326 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench Americium-241	14596-10-2	0 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench CESIUM-134	13967-70-9	0 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench THORIUM-230	14269-63-7	0 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench Uranium-235	15117-96-1	0.23 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench Uranium-238	7440-81-1	0 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench AC-228	7440-34-8	1.1 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench BI-212	14913-49-6	0 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench BI-214	14733-03-0	0.442 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench K-40	13968-0-2	13.1 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench PA-234	15100-28-4	0 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench PA-234M	15100-28-4m	0 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench PB-212	15092-94-1	0.952 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench PB-214	15067-28-4	0.491 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench PO-210	13981-52-7	0 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench RA-226	10031-23-9	3.71 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench Th-231	14932-40-2	0 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench TL-208	14913-50-9	0.326 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench Americium-241	14596-10-2	0 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench CESIUM-134	13967-70-9	0 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench THORIUM-230	14269-63-7	0 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench Uranium-235	15117-96-1	0.23 pCi/g	0
02E0010-014.001	Soil	ASP-A-004 HPGe	East Trench Uranium-238	7440-81-1	0 pCi/g	0
02E0010-015.001	Soil	ASP-A-004 HPGe	Stockpile 1 S AC-228	7440-34-8	1.07 pCi/g	0
02E0010-015.001	Soil	ASP-A-004 HPGe	Stockpile 1 S BI-212	14913-49-6	1.45 pCi/g	0
02E0010-015.001	Soil	ASP-A-004 HPGe	Stockpile 1 S BI-214	14733-03-0	0.61 pCi/g	0
02E0010-015.001	Soil	ASP-A-004 HPGe	Stockpile 1 S K-40	13968-0-2	13.5 pCi/g	0
02E0010-015.001	Soil	ASP-A-004 HPGe	Stockpile 1 S PA-234	15100-28-4	0 pCi/g	0
02E0010-015.001	Soil	ASP-A-004 HPGe	Stockpile 1 S PA-234M	15100-28-4m	0 pCi/g	0
02E0010-015.001	Soil	ASP-A-004 HPGe	Stockpile 1 S PB-212	15092-94-1	0.89 pCi/g	0
02E0010-015.001	Soil	ASP-A-004 HPGe	Stockpile 1 S PB-214	15067-28-4	0.64 pCi/g	0
02E0010-015.001	Soil	ASP-A-004 HPGe	Stockpile 1 S PO-210	13981-52-7	6820 pCi/g	0
02E0010-015.001	Soil	ASP-A-004 HPGe	Stockpile 1 S RA-226	10031-23-9	0 pCi/g	0
02E0010-015.001	Soil	ASP-A-004 HPGe	Stockpile 1 S Th-231	14932-40-2	0 pCi/g	0
02E0010-015.001	Soil	ASP-A-004 HPGe	Stockpile 1 S TL-208	14913-50-9	0.366 pCi/g	0
02E0010-015.001	Soil	ASP-A-004 HPGe	Stockpile 1 S Americium-241	14596-10-2	0 pCi/g	0
02E0010-015.001	Soil	ASP-A-004 HPGe	Stockpile 1 S CESIUM-134	13967-70-9	0 pCi/g	0
02E0010-015.001	Soil	ASP-A-004 HPGe	Stockpile 1 S THORIUM-230	14269-63-7	0 pCi/g	0
02E0010-015.001	Soil	ASP-A-004 HPGe	Stockpile 1 S Uranium-235	15117-96-1	0.238 pCi/g	0
02E0010-015.001	Soil	ASP-A-004 HPGe	Stockpile 1 S Uranium-238	7440-81-1	2.88 pCi/g	0
02E0010-015.001	Soil	ASP-A-004 HPGe	Stockpile 1 S AC-228	7440-34-8	1.07 pCi/g	0

106

13

DATE	TIME	ANALYST	ANALYST CODE	FIELD NO.	FIELD NAME	ISOTOPE	CONC.	REMARKS	RESULT	UNIT	REMARKS	RESULT	UNIT
02E0010-017.001	Soil	ASP-A-004	HPGe	02E0010-017	Stockpile 3 N	PA-234			0	pCi/g			
02E0010-017.001	Soil	ASP-A-004	HPGe	02E0010-017	Stockpile 3 N	PA-234M			0	pCi/g			
02E0010-017.001	Soil	ASP-A-004	HPGe	02E0010-017	Stockpile 3 N	PB-212			1.08	pCi/g			
02E0010-017.001	Soil	ASP-A-004	HPGe	02E0010-017	Stockpile 3 N	PB-214			0.568	pCi/g			
02E0010-017.001	Soil	ASP-A-004	HPGe	02E0010-017	Stockpile 3 N	PO-210	13981-52.7		0	pCi/g			
02E0010-017.001	Soil	ASP-A-004	HPGe	02E0010-017	Stockpile 3 N	RA-226	10031-23.9		0	pCi/g			
02E0010-017.001	Soil	ASP-A-004	HPGe	02E0010-017	Stockpile 3 N	Th-231			0	pCi/g			
02E0010-017.001	Soil	ASP-A-004	HPGe	02E0010-017	Stockpile 3 N	TL-208			0.35	pCi/g			
02E0010-017.001	Soil	ASP-A-004	HPGe	02E0010-017	Stockpile 3 N	Americium-241	14596-10.2		0	pCi/g			4
02E0010-017.001	Soil	ASP-A-004	HPGe	02E0010-017	Stockpile 3 N	CESIUM-134	13967-70.9		0	pCi/g			
02E0010-017.001	Soil	ASP-A-004	HPGe	02E0010-017	Stockpile 3 N	THORIUM-230	14269-63.7		0	pCi/g			
02E0010-017.001	Soil	ASP-A-004	HPGe	02E0010-017	Stockpile 3 N	Uranium-235	15117-96.1		0.27	pCi/g			1
02E0010-017.001	Soil	ASP-A-004	HPGe	02E0010-017	Stockpile 3 N	Uranium-238	7440-61.1		1.81	pCi/g			8
02E0010-018.001	Soil	ASP-A-004	HPGe		Stockpile 3 N	AC-228	7440-34.8		1	pCi/g			
02E0010-018.001	Soil	ASP-A-004	HPGe		Stockpile 3 N	BI-212	14913-49.6		1.71	pCi/g			
02E0010-018.001	Soil	ASP-A-004	HPGe		Stockpile 3 N	BI-214	14733-03.0		0.47	pCi/g			
02E0010-018.001	Soil	ASP-A-004	HPGe		Stockpile 3 N	K-40	13966-0.2		11.8	pCi/g			
02E0010-018.001	Soil	ASP-A-004	HPGe		Stockpile 3 N	PA-234	15100-28.4		0	pCi/g			
02E0010-018.001	Soil	ASP-A-004	HPGe		Stockpile 3 N	PA-234M	15100-28.4m		0	pCi/g			
02E0010-018.001	Soil	ASP-A-004	HPGe		Stockpile 3 N	PB-212	15092-94.1		0.778	pCi/g			
02E0010-018.001	Soil	ASP-A-004	HPGe		Stockpile 3 N	PB-214	15067-28.4		0.804	pCi/g			
02E0010-018.001	Soil	ASP-A-004	HPGe		Stockpile 3 N	PO-210	13981-52.7		0	pCi/g			
02E0010-018.001	Soil	ASP-A-004	HPGe		Stockpile 3 N	RA-226	10031-23.9		0	pCi/g			
02E0010-018.001	Soil	ASP-A-004	HPGe		Stockpile 3 N	Th-231	14932-40.2		0	pCi/g			
02E0010-018.001	Soil	ASP-A-004	HPGe		Stockpile 3 N	TL-208	14913-50.9		0.318	pCi/g			
02E0010-018.001	Soil	ASP-A-004	HPGe		Stockpile 3 N	Americium-241	14596-10.2		0	pCi/g			4
02E0010-018.001	Soil	ASP-A-004	HPGe		Stockpile 3 N	CESIUM-134	13967-70.9		0	pCi/g			
02E0010-018.001	Soil	ASP-A-004	HPGe		Stockpile 3 N	THORIUM-230	14269-63.7		0	pCi/g			
02E0010-018.001	Soil	ASP-A-004	HPGe		Stockpile 3 N	Uranium-235	15117-96.1		0.21	pCi/g			1
02E0010-018.001	Soil	ASP-A-004	HPGe		Stockpile 3 N	Uranium-238	7440-61.1		1.7	pCi/g			8
02E0010-018.001	Soil	ASP-A-004	HPGe	02E0010-018	Stockpile 3 N	AC-228	7440-34.8		1	pCi/g			
02E0010-018.001	Soil	ASP-A-004	HPGe	02E0010-018	Stockpile 3 N	BI-212			1.71	pCi/g			
02E0010-018.001	Soil	ASP-A-004	HPGe	02E0010-018	Stockpile 3 N	BI-214			0.47	pCi/g			
02E0010-018.001	Soil	ASP-A-004	HPGe	02E0010-018	Stockpile 3 N	K-40	13966-0.2		11.8	pCi/g			
02E0010-018.001	Soil	ASP-A-004	HPGe	02E0010-018	Stockpile 3 N	PA-234			0	pCi/g			
02E0010-018.001	Soil	ASP-A-004	HPGe	02E0010-018	Stockpile 3 N	PA-234M			0	pCi/g			
02E0010-018.001	Soil	ASP-A-004	HPGe	02E0010-018	Stockpile 3 N	PB-212			0.778	pCi/g			
02E0010-018.001	Soil	ASP-A-004	HPGe	02E0010-018	Stockpile 3 N	PB-214			0.804	pCi/g			
02E0010-018.001	Soil	ASP-A-004	HPGe	02E0010-018	Stockpile 3 N	PO-210	13981-52.7		0	pCi/g			
02E0010-018.001	Soil	ASP-A-004	HPGe	02E0010-018	Stockpile 3 N	RA-226	10031-23.9		0	pCi/g			
02E0010-018.001	Soil	ASP-A-004	HPGe	02E0010-018	Stockpile 3 N	Th-231			0	pCi/g			
02E0010-018.001	Soil	ASP-A-004	HPGe	02E0010-018	Stockpile 3 N	TL-208			0.318	pCi/g			
02E0010-018.001	Soil	ASP-A-004	HPGe	02E0010-018	Stockpile 3 N	Americium-241	14596-10.2		0	pCi/g			4
02E0010-018.001	Soil	ASP-A-004	HPGe	02E0010-018	Stockpile 3 N	CESIUM-134	13967-70.9		0	pCi/g			
02E0010-018.001	Soil	ASP-A-004	HPGe	02E0010-018	Stockpile 3 N	THORIUM-230	14269-63.7		0	pCi/g			
02E0010-018.001	Soil	ASP-A-004	HPGe	02E0010-018	Stockpile 3 N	Uranium-235	15117-96.1		0.21	pCi/g			1
02E0010-018.001	Soil	ASP-A-004	HPGe	02E0010-018	Stockpile 3 N	Uranium-238	7440-61.1		1.7	pCi/g			8
02E0010-018.001	Soil	ASP-A-004	ALPHA SPEC	02E0010-019	BU39-0011	Americium-241	14596-10.2		0.0665	PCVG	U		0.0916
02E0010-018.001	Soil	ASP-A-004	ALPHA SPEC	02E0010-019	BU39-0011	Plutonium-239/240	10-12-8		0.00753	PCVG	U		0.0288
02E0010-018.001	Soil	ASP-A-004	ALPHA SPEC	02E0010-019	BU39-0011	Uranium-234	11-08-5		0.573	PCVG	J		0.202
02E0010-019.001	Soil	ASP-A-004	ALPHA SPEC	02E0010-019	BU39-0011	Uranium-235	15117-96.1		0.00506	PCVG	U		0.125
02E0010-019.002	Soil	URS108	HPGe	02E0010-019	BU39-0011	Uranium-238	7440-61.1		0.733	PCVG	J		0.0949
02E0010-019.002	Soil	URS108	HPGe	02E0010-019	BU39-0011	AC-228	7440-34.8		1.07	pCi/g			
02E0010-019.002	Soil	URS108	HPGe	02E0010-019	BU39-0011	BI-212	14913-49.6		1.2	pCi/g			
02E0010-019.002	Soil	URS108	HPGe	02E0010-019	BU39-0011	BI-214	14733-03.0		0.617	pCi/g			
02E0010-019.002	Soil	URS108	HPGe	02E0010-019	BU39-0011	K-40	13966-0.2		14.7	pCi/g			
02E0010-019.002	Soil	URS108	HPGe	02E0010-019	BU39-0011	PA-234	15100-28.4		0	pCi/g			
02E0010-019.002	Soil	URS108	HPGe	02E0010-019	BU39-0011	PA-234M	15100-28.4m		0	pCi/g			
02E0010-019.002	Soil	URS108	HPGe	02E0010-019	BU39-0011	PB-212	15092-94.1		1.15	pCi/g			
02E0010-019.002	Soil	URS108	HPGe	02E0010-019	BU39-0011	PB-214	15067-28.4		0.79	pCi/g			
02E0010-019.002	Soil	URS108	HPGe	02E0010-019	BU39-0011	PO-210	13981-52.7		0	pCi/g			
02E0010-019.002	Soil	URS108	HPGe	02E0010-019	BU39-0011	RA-226	10031-23.9		4.14	pCi/g			
02E0010-019.002	Soil	URS108	HPGe	02E0010-019	BU39-0011	Th-231	14932-40.2		0	pCi/g			
02E0010-019.002	Soil	URS108	HPGe	02E0010-019	BU39-0011	TL-208	14913-50.9		0.328	pCi/g			
02E0010-019.002	Soil	URS108	HPGe	02E0010-019	BU39-0011	Americium-241	14596-10.2		0	pCi/g			4
02E0010-019.002	Soil	URS108	HPGe	02E0010-019	BU39-0011	CESIUM-134	13967-70.9		0	pCi/g			
02E0010-019.002	Soil	URS108	HPGe	02E0010-019	BU39-0011	THORIUM-230	14269-63.7		0	pCi/g			
02E0010-019.002	Soil	URS108	HPGe	02E0010-019	BU39-0011	Uranium-235	15117-96.1		0	pCi/g			
02E0010-019.002	Soil	URS108	HPGe	02E0010-019	BU39-0011	Uranium-238	7440-61.1		3.06	pCi/g			8
02E0010-020.001	Soil	ASP-A-004	ALPHA SPEC	02E0010-020	BV39-0003	Americium-241	14596-10.2		0.0306	PCVG	U		0.0459
02E0010-020.001	Soil	ASP-A-004	ALPHA SPEC	02E0010-020	BV39-0003	Plutonium-239/240	10-12-8		0.00357	PCVG	U		0.0342

15

			METH CODE	SAMPLE NUM	LOCATION	RADYOTE	CAS NO.	RESULT	UNIT	QUAL	QUAN				
02E0010-023.001	Soil	URS10B19	HPGe	02E0010-023	M. Stockpile 2	PB-214	15067-28-4	0.841	pCi/g					0	
02E0010-023.001	Soil	URS10B19	HPGe	02E0010-023	M. Stockpile 2	PO-210	13981-52-7	.4940	pCi/g					0	
02E0010-023.001	Soil	URS10B19	HPGe	02E0010-023	M. Stockpile 2	RA-226	10031-23-9	0	pCi/g					0	
02E0010-023.001	Soil	URS10B19	HPGe	02E0010-023	M. Stockpile 2	Th-231	14932-40-2	0	pCi/g					0	
02E0010-023.001	Soil	URS10B19	HPGe	02E0010-023	M. Stockpile 2	TL-208	14913-50-9	0.374	pCi/g					0	
02E0010-023.001	Soil	URS10B19	HPGe	02E0010-023	M. Stockpile 2	Americium-241	14596-10-2	0	pCi/g					0	4
02E0010-023.001	Soil	URS10B19	HPGe	02E0010-023	M. Stockpile 2	CESIUM-134	13967-70-9	0	pCi/g					0	
02E0010-023.001	Soil	URS10B19	HPGe	02E0010-023	M. Stockpile 2	THORIUM-230	14269-63-7	0	pCi/g					0	
02E0010-023.001	Soil	URS10B19	HPGe	02E0010-023	M. Stockpile 2	Uranium-235	15117-96-1	0.21	pCi/g					0	1
02E0010-023.001	Soil	URS10B19	HPGe	02E0010-023	M. Stockpile 2	Uranium-238	7440-61-1	2.12	pCi/g					0	8
02E0010-023.002	Soil	ASP-A-004	ALPHA SPEC	02E0010-023	M. Stockpile 2	Americium-241	14596-10-2	0.0528	PCVG	U				0.0933	
02E0010-023.002	Soil	ASP-A-004	ALPHA SPEC	02E0010-023	M. Stockpile 2	Plutonium-239/240	10-12-8	-0.00307	PCVG	U				0.0471	
02E0010-023.002	Soil	ASP-A-004	ALPHA SPEC	02E0010-023	M. Stockpile 2	Uranium-234	11-08-5	1	PCVG	J				0.154	
02E0010-023.002	Soil	ASP-A-004	ALPHA SPEC	02E0010-023	M. Stockpile 2	Uranium-235	15117-96-1	-0.00837	PCVG	U				0.163	
02E0010-023.002	Soil	ASP-A-004	ALPHA SPEC	02E0010-023	M. Stockpile 2	Uranium-238	7440-61-1	0.845	PCVG	J				0.118	
02E0010-024.001	Soil	URS10B19	HPGe	02E0010-024	M. Dupe 2	AC-228	7440-34-8	1.27	pCi/g					0	
02E0010-024.001	Soil	URS10B19	HPGe	02E0010-024	M. Dupe 2	Bi-212	14913-49-6	1.01	pCi/g					0	
02E0010-024.001	Soil	URS10B19	HPGe	02E0010-024	M. Dupe 2	Bi-214	14733-03-0	0.501	pCi/g					0	
02E0010-024.001	Soil	URS10B19	HPGe	02E0010-024	M. Dupe 2	K-40	13966-0-2	13.1	pCi/g					0	
02E0010-024.001	Soil	URS10B19	HPGe	02E0010-024	M. Dupe 2	PA-234	15100-28-4	0	pCi/g					0	
02E0010-024.001	Soil	URS10B19	HPGe	02E0010-024	M. Dupe 2	PA-234M	15100-28-4m	0	pCi/g					0	
02E0010-024.001	Soil	URS10B19	HPGe	02E0010-024	M. Dupe 2	PB-212	15092-94-1	1.17	pCi/g					0	
02E0010-024.001	Soil	URS10B19	HPGe	02E0010-024	M. Dupe 2	PB-214	15067-28-4	0.77	pCi/g					0	
02E0010-024.001	Soil	URS10B19	HPGe	02E0010-024	M. Dupe 2	PO-210	13981-52-7	0	pCi/g					0	
02E0010-024.001	Soil	URS10B19	HPGe	02E0010-024	M. Dupe 2	RA-226	10031-23-9	0	pCi/g					0	
02E0010-024.001	Soil	URS10B19	HPGe	02E0010-024	M. Dupe 2	Th-231	14932-40-2	0	pCi/g					0	
02E0010-024.001	Soil	URS10B19	HPGe	02E0010-024	M. Dupe 2	TL-208	14913-50-9	0.371	pCi/g					0	
02E0010-024.001	Soil	URS10B19	HPGe	02E0010-024	M. Dupe 2	Americium-241	14596-10-2	0	pCi/g					0	4
02E0010-024.001	Soil	URS10B19	HPGe	02E0010-024	M. Dupe 2	CESIUM-134	13967-70-9	0	pCi/g					0	
02E0010-024.001	Soil	URS10B19	HPGe	02E0010-024	M. Dupe 2	THORIUM-230	14269-63-7	0	pCi/g					0	
02E0010-024.001	Soil	URS10B19	HPGe	02E0010-024	M. Dupe 2	Uranium-235	15117-96-1	0.307	pCi/g					0	1
02E0010-024.001	Soil	URS10B19	HPGe	02E0010-024	M. Dupe 2	Uranium-238	7440-61-1	2.02	pCi/g					0	8
02E0010-024.002	Soil	ASP-A-004	ALPHA SPEC	02E0010-024	M. Dupe 2	Americium-241	14596-10-2	0	PCVG	U				0.0425	
02E0010-024.002	Soil	ASP-A-004	ALPHA SPEC	02E0010-024	M. Dupe 2	Plutonium-239/240	10-12-8	-0.00342	PCVG	U				0.0532	
02E0010-024.002	Soil	ASP-A-004	ALPHA SPEC	02E0010-024	M. Dupe 2	Uranium-234	11-08-5	0.838	PCVG	J				0.107	
02E0010-024.002	Soil	ASP-A-004	ALPHA SPEC	02E0010-024	M. Dupe 2	Uranium-235	15117-96-1	0.039	PCVG	U				0.0964	
02E0010-024.002	Soil	ASP-A-004	ALPHA SPEC	02E0010-024	M. Dupe 2	Uranium-238	7440-61-1	0.803	PCVG	J				0.0483	
02E0010-025.001	Soil	URS10B19	HPGe	02E0010-025	S. Stockpile 3	AC-228	7440-34-8	1.25	pCi/g					0	
02E0010-025.001	Soil	URS10B19	HPGe	02E0010-025	S. Stockpile 3	Bi-212	14913-49-6	1.11	pCi/g					0	
02E0010-025.001	Soil	URS10B19	HPGe	02E0010-025	S. Stockpile 3	Bi-214	14733-03-0	0.811	pCi/g					0	
02E0010-025.001	Soil	URS10B19	HPGe	02E0010-025	S. Stockpile 3	K-40	13966-0-2	12.6	pCi/g					0	
02E0010-025.001	Soil	URS10B19	HPGe	02E0010-025	S. Stockpile 3	PA-234	15100-28-4	0	pCi/g					0	
02E0010-025.001	Soil	URS10B19	HPGe	02E0010-025	S. Stockpile 3	PA-234M	15100-28-4m	0	pCi/g					0	
02E0010-025.001	Soil	URS10B19	HPGe	02E0010-025	S. Stockpile 3	PB-212	15092-94-1	0.931	pCi/g					0	
02E0010-025.001	Soil	URS10B19	HPGe	02E0010-025	S. Stockpile 3	PB-214	15067-28-4	0.616	pCi/g					0	
02E0010-025.001	Soil	URS10B19	HPGe	02E0010-025	S. Stockpile 3	PO-210	13981-52-7	0	pCi/g					0	
02E0010-025.001	Soil	URS10B19	HPGe	02E0010-025	S. Stockpile 3	RA-226	10031-23-9	0	pCi/g					0	
02E0010-025.001	Soil	URS10B19	HPGe	02E0010-025	S. Stockpile 3	Th-231	14932-40-2	0	pCi/g					0	
02E0010-025.001	Soil	URS10B19	HPGe	02E0010-025	S. Stockpile 3	TL-208	14913-50-9	0.322	pCi/g					0	
02E0010-025.001	Soil	URS10B19	HPGe	02E0010-025	S. Stockpile 3	Americium-241	14596-10-2	0	pCi/g					0	4
02E0010-025.001	Soil	URS10B19	HPGe	02E0010-025	S. Stockpile 3	CESIUM-134	13967-70-9	0	pCi/g					0	
02E0010-025.001	Soil	URS10B19	HPGe	02E0010-025	S. Stockpile 3	THORIUM-230	14269-63-7	0	pCi/g					0	
02E0010-025.001	Soil	URS10B19	HPGe	02E0010-025	S. Stockpile 3	Uranium-235	15117-96-1	0.182	pCi/g					0	1
02E0010-025.001	Soil	URS10B19	HPGe	02E0010-025	S. Stockpile 3	Uranium-238	7440-61-1	1.52	pCi/g					0	8
02E0010-025.002	Soil	URS10B19	ALPHA SPEC	02E0010-025	S. Stockpile 3	Americium-241	14596-10-2	-0.00615	PCVG	U				0.0786	
02E0010-025.002	Soil	URS10B19	ALPHA SPEC	02E0010-025	S. Stockpile 3	Plutonium-239/240	10-12-8	-0.00825	PCVG	U				0.0345	
02E0010-025.002	Soil	URS10B19	ALPHA SPEC	02E0010-025	S. Stockpile 3	Uranium-234	11-08-5	0.831	PCVG	J				0.101	
02E0010-025.002	Soil	URS10B19	ALPHA SPEC	02E0010-025	S. Stockpile 3	Uranium-235	15117-96-1	0.0288	PCVG	U				0.0837	
02E0010-025.002	Soil	URS10B19	ALPHA SPEC	02E0010-025	S. Stockpile 3	Uranium-238	7440-61-1	0.686	PCVG	J				0.0854	
02E0010-026.001	Soil	URS10B19	HPGe	02E0010-026	Wste Char BU38-0006	AC-228	7440-34-8	1.63	pCi/g					0	
02E0010-026.001	Soil	URS10B19	HPGe	02E0010-026	Wste Char BU38-0009	Bi-212	14913-49-6	1.49	pCi/g					0	
02E0010-026.001	Soil	URS10B19	HPGe	02E0010-026	Wste Char BU38-0009	Bi-214	14733-03-0	0.67	pCi/g					0	
02E0010-026.001	Soil	URS10B19	HPGe	02E0010-026	Wste Char BU38-0009	K-40	13966-0-2	19.5	pCi/g					0	
02E0010-026.001	Soil	URS10B19	HPGe	02E0010-026	Wste Char BU38-0009	PA-234	15100-28-4	0	pCi/g					0	
02E0010-026.001	Soil	URS10B19	HPGe	02E0010-026	Wste Char BU38-0009	PA-234M	15100-28-4m	0	pCi/g					0	
02E0010-026.001	Soil	URS10B19	HPGe	02E0010-026	Wste Char BU38-0009	PB-212	15092-94-1	1.59	pCi/g					0	
02E0010-026.001	Soil	URS10B19	HPGe	02E0010-026	Wste Char BU38-0009	PB-214	15067-28-4	0.651	pCi/g					0	
02E0010-026.001	Soil	URS10B19	HPGe	02E0010-026	Wste Char BU38-0009	PO-210	13981-52-7	0	pCi/g					0	
02E0010-026.001	Soil	URS10B19	HPGe	02E0010-026	Wste Char BU38-0009	RA-226	10031-23-9	0	pCi/g					0	
02E0010-026.001	Soil	URS10B19	HPGe	02E0010-026	Wste Char BU38-0009	Th-231	14932-40-2	0	pCi/g					0	
02E0010-026.001	Soil	URS10B19	HPGe	02E0010-026	Wste Char BU38-0009	TL-208	14913-50-9	0.484	pCi/g					0	

USE 123
Analytical Data

DATE	TIME	LOC	DEPTH	LAB	ANALYST	COMMENTS	CONC	UNIT	REMARKS	DATE	TIME	LOC	DEPTH	LAB	ANALYST	COMMENTS	CONC	UNIT	REMARKS
02E0010-026.001		Soil		URS10819	HPGe	02E0010-026	Wsta Char BU38-0009	Americium-241	14596-10-2	0 pCi/g									0
02E0010-026.001		Soil		URS10819	HPGe	02E0010-026	Wsta Char BU38-0009	CESURIUM-134	13967-70-9	0 pCi/g									0
02E0010-026.001		Soil		URS10819	HPGe	02E0010-026	Wsta Char BU38-0009	THORIUM-230	14269-63-7	0 pCi/g									0
02E0010-026.001		Soil		URS10819	HPGe	02E0010-026	Wsta Char BU38-0009	Uranium-235	15117-96-1	0.25 pCi/g									0
02E0010-026.001		Soil		URS10819	HPGe	02E0010-026	Wsta Char BU38-0009	Uranium-238	7440-61-1	1.26 pCi/g									0
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	1,1,1,2-TETRACHLOROETHANE	630-20-6	5.3 UG/KG	U	V1							1
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	1,1,1-TCA	71-55-6	5.3 UG/KG	U	V1							1
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	1,1,2,2-Tetrachloroethane	79-34-5	5.3 UG/KG	U	V1							1.2
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	1,1,2-TCA	79-00-5	5.3 UG/KG	U	V1							1.8
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	1,1,2-TRICHLOROTRIFLUOROETHANE	78-13-1	5.3 UG/KG	U	V1							1.3
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	1,1-DCA	75-34-3	5.3 UG/KG	U	V1							1
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	1,1-DCE	75-35-4	5.3 UG/KG	U	V1							1.2
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	1,1-DICHLOROPROPENE	563-56-6	5.3 UG/KG	U	V1							0.97
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	1,2-DICHLOROETHANE -D4	17060-07-0	92 %REC									
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	1,2,3-TRICHLOROBENZENE	67-61-6	5.3 UG/KG	U	V1							0.65
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	1,2,3-TRICHLOROPROPANE	96-18-4	5.3 UG/KG	U	V1							1.6
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	1,2,4-Trichlorobenzene	120-82-1	5.3 UG/KG	U	V1							0.75
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	1,2-DCA	107-06-2	5.3 UG/KG	U	V1							1
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	1,2-DCB	95-50-1	5.3 UG/KG	U	V1							1.2
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	1,2-Dibromo-3-chloropropane	96-12-8	5.3 UG/KG	U	V1							1.5
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	1,2-DIBROMOETHANE	106-93-4	5.3 UG/KG	U	V1							0.97
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	1,2-Dichloropropane	78-87-5	5.3 UG/KG	U	V1							1.3
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	1,3-DICHLOROBENZENE	541-73-1	5.3 UG/KG	U	V1							1
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	1,3-DICHLOROPROPANE	142-28-9	5.3 UG/KG	U	V1							1
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	1,4-DCB	106-46-7	5.3 UG/KG	U	V1							1.5
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	2,2-DICHLOROPROPANE	594-20-7	5.3 UG/KG	U	V1							0.84
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	2-Butanone	78-93-3	21 UG/KG	U	V1							4.9
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	2-HEXANONE	591-78-6	21 UG/KG	U	V1							4.8
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	4-ISOPROPYLTOLUENE	99-87-6	5.3 UG/KG	U	V1							1.6
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	4-METHYL-2-PENTANONE	106-10-1	21 UG/KG	U	V1							4.1
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	Acetone	67-64-1	21 UG/KG	U	V1							4.8
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	Benzene	71-43-2	5.3 UG/KG	U	V1							0.94
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	BENZENE, 1,2,4-TRIMETHYL	95-63-6	5.3 UG/KG	U	V1							1
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	BENZENE, 1,3,5-TRIMETHYL	108-67-8	5.3 UG/KG	U	V1							1.3
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	BROMOBENZENE	108-86-1	5.3 UG/KG	U	V1							0.96
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	BROMOCHLOROMETHANE	74-97-5	5.3 UG/KG	U	V1							0.75
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	Bromodichloromethane	75-27-4	5.3 UG/KG	U	V1							0.97
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	BROMOFLUOROBENZENE	460-00-4	83 %REC									
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	Bromoform	75-25-2	5.3 UG/KG	U	V1							0.96
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	Bromomethane	74-83-9	5.3 UG/KG	U	V1							1.3
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	CARBON DISULFIDE	75-15-0	5.3 UG/KG	U	V1							0.97
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	Carbon tetrachloride	56-23-5	5.3 UG/KG	U	V1							1.3
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	Chlorobenzene	108-90-7	5.3 UG/KG	U	V1							0.79
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	Chloroethane	75-00-3	5.3 UG/KG	U	V1							1.4
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	Chloroform	67-66-3	5.3 UG/KG	U	V1							0.95
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	Chloromethane	74-87-3	5.3 UG/KG	U	V1							1.6
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	cis-1,2-DICHLOROETHENE	156-59-2	2.6 UG/KG	U	V1							0.88
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	Cis-1,3-Dichloropropene	10061-01-5	5.3 UG/KG	U	V1							1
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	Dibromochloromethane	124-48-1	5.3 UG/KG	U	V1							0.95
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	Dibromofluoromethane	1866-53-7	91 %REC									
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	DIBROMOMETHANE	74-95-3	5.3 UG/KG	U	V1							1.4
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	DICHLORODIFLUOROMETHANE	75-71-8	5.3 UG/KG	U	V1							1.7
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	Ethylbenzene	100-41-4	5.3 UG/KG	U	V1							1.3
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	Hexachlorobutadiene	67-68-3	5.3 UG/KG	U	V1							1.5
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	ISOPROPYLBENZENE	98-42-8	5.3 UG/KG	U	V1							0.89
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	Methylene chloride	75-09-2	2.5 UG/KG	JB	JB1	249						0.84
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	n-BUTYLBENZENE	104-51-6	5.3 UG/KG	U	V1							1.3
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	n-PROPYLBENZENE	103-65-1	5.3 UG/KG	U	V1							1
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	Naphthalene	91-20-3	5.3 UG/KG	U	V1							0.9
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	o-CHLOROTOLUENE	95-49-6	5.3 UG/KG	U	V1							1.3
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	p-CHLOROTOLUENE	106-43-4	5.3 UG/KG	U	V1							1.5
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	sec-BUTYLBENZENE	135-98-8	5.3 UG/KG	U	V1							1.3
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	Styrene	100-42-5	5.3 UG/KG	U	V1							0.89
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	TCE	79-01-6	5.3 UG/KG	U	V1							0.91
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	tert-BUTYLBENZENE	98-06-6	5.3 UG/KG	U	V1							1.3
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	Tetrachloroethene	127-18-4	5.3 UG/KG	U	V1							1
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	Toluene	106-86-3	5.3 UG/KG	U	V1							0.82
02E0010-026.002		Soil		VOA-A-011	SW-846 8260	02E0010-026	Wsta Char BU38-0009	TOLUENE - D8	2037-26-3	88 %REC									

			ANALY	PETA	LOCATN	ANALYTE	CAUS	RESUL	NUMTS	COUNT		
			METH CODE	SAMP NUM								
02E0010-026.002	Soil	VQA-A-011	SW-846 8280	02E0010-026	Wste Char BU38-0009	Vinyl chloride	75-01-4	5.3	UG/KG	U	V1	1.2
02E0010-026.002	Soil	VQA-A-011	SW-846 8280	02E0010-026	Wste Char BU38-0009	Xylenes (total)	1330-20-7	5.3	UG/KG	U	V1	2.8
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	UNKNOWN		1300	UG/KG	J	V1	
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	1,2,4-Trichlorobenzene	120-82-1	350	UG/KG	U	V1	67
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	1,2-DCB	95-50-1	350	UG/KG	U	V1	67
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	1,3-DICHLOROBENZENE	541-73-1	350	UG/KG	U	V1	74
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	1,4-DCB	106-46-7	350	UG/KG	U	V1	58
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	2,4,5-Trichlorophenol	95-95-4	350	UG/KG	U	V1	79
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	2,4,6-Trichlorophenol	118-79-6	61 %REC	I			
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	2,4,6-Trichlorophenol	88-06-2	350	UG/KG	U	V1	52
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	2,4-Dichlorophenol	120-83-2	350	UG/KG	U	V1	92
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	2,4-Dimethylphenol	105-67-9	350	UG/KG	U	V1	
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	2,4-Dinitrophenol	51-25-5	1700	UG/KG	U	UJ1 140	520
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	2,4-DNT	121-14-2	350	UG/KG	U	UJ1 140	100
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	2,6-DNT	806-20-2	350	UG/KG	U	V1	100
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	2-Chloronaphthalene	91-59-7	350	UG/KG	U	V1	40
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	2-Chlorophenol	95-57-8	350	UG/KG	U	V1	76
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	2-FLUOROBIPHENYL	321-60-8	58 %REC	I			
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	2-Methylnaphthalene	91-57-6	350	UG/KG	U	V1	62
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	2-Methylphenol	95-45-7	350	UG/KG	U	V1	81
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	2-Nitraniline	88-74-4	1700	UG/KG	U	V1	64
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	2-NITROPHENOL	85-75-5	350	UG/KG	U	V1	130
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	3,3'-Dichlorobenzidine	91-94-1	1400	UG/KG	U	V1	70
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	3-NITROANILINE	99-09-2	1700	UG/KG	U	V1	89
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	4,6-Dinitro-2-methylphenol	534-52-1	1700	UG/KG	U	UJ1 140	440
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	4-CHLORO-3-METHYLPHENOL	59-50-7	350	UG/KG	U	V1	59
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	4-Chloroaniline	106-47-8	350	UG/KG	U	V1	49
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	4-CHLOROPHENYL PHENYL ETHER	7008-72-3	350	UG/KG	U	V1	74
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	4-Methylphenol	106-44-5	350	UG/KG	U	V1	77
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	4-NITROANILINE	100-01-6	1700	UG/KG	U	V1	67
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	4-Nitrophenol	100-02-7	140	UG/KG	J	JB1 249	99
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	ACENAPHTHYLENE	206-96-8	350	UG/KG	U	V1	36
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Acenaphthene	83-32-9	350	UG/KG	U	V1	48
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Anthracene	120-12-7	350	UG/KG	U	V1	82
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Benzo(a)anthracene	56-55-3	350	UG/KG	U	V1	41
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Benzo(a)pyrene	50-32-8	350	UG/KG	U	V1	98
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Benzo(b)fluoranthene	205-99-2	350	UG/KG	U	V1	100
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	BENZO(g,h)PERYLENE	191-24-2	350	UG/KG	U	V1	73
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	BENZO(k)FLUORANTHENE	207-08-9	350	UG/KG	U	V1	97
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Benzoic acid	65-85-0	1700	UG/KG	U	V1	600
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Benzyl alcohol	100-51-6	350	UG/KG	U	V1	81
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Bis(2-chlorethyl)ether	111-44-4	350	UG/KG	U	V1	51
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	BIS(2-CHLOROETHOXY)METHANE	111-91-1	350	UG/KG	U	V1	77
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Bis(2-chloroisopropyl)ether	39638-32-9	350	UG/KG	U	V1	72
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Bis(2-ethoxyethyl)phthalate	117-61-7	350	UG/KG	U	V1	72
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Butyl benzyl phthalate	85-66-7	350	UG/KG	U	V1	36
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Chrysene	218-01-9	350	UG/KG	U	V1	56
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Di-n-BUTYL PHTHALATE	84-74-2	350	UG/KG	U	V1	80
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Di-n-octylphthalate	117-84-0	350	UG/KG	U	V1	38
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Dibenz(a,h)anthracene	53-70-3	350	UG/KG	U	V1	39
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Dibenzofuran	132-64-9	350	UG/KG	U	V1	86
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Diethyl phthalate	84-66-2	690	UG/KG	U	V1	55
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Dimethyl phthalate	131-11-3	350	UG/KG	U	V1	89
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Fluoranthene	206-44-0	350	UG/KG	U	V1	88
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Fluorene	86-73-7	350	UG/KG	U	V1	80
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Hexachlorobenzene	118-74-1	350	UG/KG	U	V1	80
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Hexachlorobutadiene	87-68-3	350	UG/KG	U	V1	100
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Hexachlorocyclopentadiene	77-47-4	690	UG/KG	U	V1	35
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Hexachloroethane	67-72-1	350	UG/KG	U	V1	52
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Indeno(1,2,3-cd)pyrene	193-39-5	350	UG/KG	U	V1	50
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Isothorone	78-59-1	350	UG/KG	U	V1	71
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	n-Nitrosodi-n-propylamine	821-64-7	350	UG/KG	U	V1	92
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	n-Nitrosodiphenylamine	86-30-6	350	UG/KG	U	V1	75
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Naphthalene	91-20-3	350	UG/KG	U	V1	73
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Nitrobenzene	98-95-3	350	UG/KG	U	V1	89
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	NITROBENZENE-O5	4165-60-0	64 %REC	I			
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	o-FLUOROPHENOL	367-12-4	58 %REC	I			
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	p-BROMODIPHENYL ETHER	101-55-3	350	UG/KG	U	V1	74
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Pentachlorophenol	87-66-5	1700	UG/KG	U	V1	390
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	PHENANTHRENE	85-01-6	350	UG/KG	U	V1	39
02E0010-026.003	Soil	SVO-A-007	SW-846 82708	02E0010-026	Wste Char BU38-0009	Phenol	108-95-2	350	UG/KG	U	V1	47

DATE	TIME	LOCATION	SAMPLE NO.	ANALYST	LABORATORY	TEST NAME	RESULT	UNIT	REMARKS
02E0010-026.003	Soil	SVO-A-007	SW-848 82708	02E0010-026	Write Char BU38-0009	PHENOL-D5	4185-82.2	55 %REC	J V1
02E0010-026.003	Soil	SVO-A-007	SW-848 82708	02E0010-026	Write Char BU38-0009	Pyrene	129-00.0	62 UG/KG	J V1
02E0010-026.003	Soil	SVO-A-007	SW-848 82708	02E0010-026	Write Char BU38-0009	TERPHEHYL-D14	1718-51.0	63 %REC	J V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	ACETIC ACID, 2-ETHYLHEXYL ESTE	103-09.3	32 UG/L	J V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	ISOBUTANE	75-28.5	20 UG/L	J V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	UNKNOWN	TIC	1.5 UG/L	J V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	1,1,1,2-TETRACHLOROETHANE	630-20.6	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	1,1,1-TCA	71-55.8	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	1,1,2,2-Tetrachloroethane	79-34.5	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	1,1,2-TCA	79-00.5	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	1,1,2-TRICHLOROTRIFLUOROETHANE	76-13.1	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	1,1-DCA	75-34.3	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	1,1-DCE	75-35.4	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	1,1-DICHLOROPROPENE	563-58.6	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	1,2 DICHLOROETHANE -D4	17080-07.0	97 %REC	1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	1,2,3-TRICHLOROBENZENE	87-61.6	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	1,2,3-TRICHLOROPROPANE	96-18.4	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	1,2,4-Trichlorobenzene	120-82.1	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	1,2-DCA	107-06.2	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	1,2-DCB	95-50.1	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	1,2-Dibromo-3-chloropropane	96-12.8	2 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	1,2-DIBROMOETHANE	106-83.4	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	1,2-Dichloropropane	78-67.5	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	1,3-DICHLOROBENZENE	541-73.1	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	1,3-DICHLOROPROPANE	142-28.9	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	1,4-DCB	106-48.7	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	2,2-DICHLOROPROPANE	594-20.7	5 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	2-Butanone	78-93.3	3 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	2-HEXANONE	591-78.6	5 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	4-ISOPROPYLTOLUENE	99-87.6	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	4-METHYL-2-PENTANONE	108-10.1	5 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	Acetone	67-64.1	3.2 UG/L	J V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	Benzene	71-43.2	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	BENZENE, 1,2,4-TRIMETHYL	95-63.6	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	BENZENE, 1,3,5-TRIMETHYL	106-67.8	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	BROMOBENZENE	108-86.1	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	BROMOCHLOROMETHANE	74-97.5	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	Bromodichloromethane	75-27.4	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	BROMOFLUOROBENZENE	460-00.4	94 %REC	1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	Bromoform	75-25.2	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	Bromomethane	74-83.9	2 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	CARBON DISULFIDE	75-15.0	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	Carbon tetrachloride	56-23.5	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	Chlorobenzene	108-90.7	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	Chloromethane	75-00.3	2 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	Chloroform	67-66.3	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	Chloromethane	74-87.3	2 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	cis-1,2-DICHLOROETHENE	156-59.2	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	Cis-1,3-Dichloropropene	10081-01.5	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	Dibromochloromethane	124-48.1	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	Dibromofluoromethane	1868-53.7	104 %REC	1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	DIBROMOMETHANE	74-95.3	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	DICHLORODIFLUOROMETHANE	75-71.8	2 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	Ethylbenzene	100-41.4	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	Hexachlorobutadiene	87-68.3	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	ISOPROPYLBENZENE	98-82.8	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	Methylene chloride	75-09.2	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	n-BUTYLBENZENE	104-51.8	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	n-PROPYLBENZENE	103-65.1	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	Naphthalene	91-20.3	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	o-CHLOROTOLUENE	95-49.6	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	p-CHLOROTOLUENE	108-43.4	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	sec-BUTYLBENZENE	135-98.8	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	Styrene	100-42.3	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	TCE	79-01.6	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	tert-BUTYLBENZENE	98-06.6	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	Tetrachloroethene	127-18.4	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	Toluene	106-88.3	1 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	TOLUENE - D8	2037-28.5	95 %REC	1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	trans-1,2-DICHLOROETHENE	156-60.5	0.5 UG/L	U V1
02E0010-027.001	Water Quality Control Matrix	VQA-A-009	SW-848 82680	02E0010-027	Trip Blank	Trans-1,3-Dichloropropene	10081-02.6	1 UG/L	U V1

20

[illegible]

DATE	TIME	SAMPLE NO.	ANALYTE	CONC.	UNIT	REMARKS
02E-0022-007.002	Soil	URS10819	HPGe	02E0022-007	BU38-0002	Th-231
02E-0022-007.002	Soil	URS10819	HPGe	02E0022-007	BU38-0002	Th-231
02E-0022-007.002	Soil	URS10819	HPGe	02E0022-007	BU38-0002	TL-208
02E-0022-007.002	Soil	URS10819	HPGe	02E0022-007	BU38-0002	TL-208
02E-0022-007.002	Soil	URS10819	HPGe	02E0022-007	BU38-0002	Americium-241
02E-0022-007.002	Soil	URS10819	HPGe	02E0022-007	BU38-0002	Americium-241
02E-0022-007.002	Soil	URS10819	HPGe	02E0022-007	BU38-0002	CESIUM-134
02E-0022-007.002	Soil	URS10819	HPGe	02E0022-007	BU38-0002	CESIUM-134
02E-0022-007.002	Soil	URS10819	HPGe	02E0022-007	BU38-0002	THORIUM-230
02E-0022-007.002	Soil	URS10819	HPGe	02E0022-007	BU38-0002	THORIUM-230
02E-0022-007.002	Soil	URS10819	HPGe	02E0022-007	BU38-0002	Uranium-235
02E-0022-007.002	Soil	URS10819	HPGe	02E0022-007	BU38-0002	Uranium-235
02E-0022-007.002	Soil	URS10819	HPGe	02E0022-007	BU38-0002	Uranium-238
02E-0022-007.002	Soil	URS10819	HPGe	02E0022-007	BU38-0002	Uranium-238
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	AC-228
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	AC-228
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	BI-212
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	BI-212
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	BI-214
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	BI-214
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	K-40
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	K-40
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	PA-234
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	PA-234
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	PA-234M
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	PA-234M
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	PB-212
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	PB-212
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	PB-214
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	PB-214
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	PO-210
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	PO-210
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	RA-226
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	RA-226
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	Th-231
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	Th-231
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	TL-208
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	TL-208
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	Americium-241
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	Americium-241
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	CESIUM-134
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	CESIUM-134
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	THORIUM-230
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	THORIUM-230
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	Uranium-235
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	Uranium-235
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	Uranium-238
02E-0022-008.002	Soil	URS10819	HPGe	02E0022-008	Central pt. On S. PWL	Uranium-238
02E-0022-009.002	Soil	URS10819	HPGe	02E0022-009	MH1-MH2 Stgple E.	AC-228
02E-0022-009.002	Soil	URS10819	HPGe	02E0022-009	MH1-MH2 Stgple E.	AC-228
02E-0022-009.002	Soil	URS10819	HPGe	02E0022-009	MH1-MH2 Stgple E.	BI-212
02E-0022-009.002	Soil	URS10819	HPGe	02E0022-009	MH1-MH2 Stgple E.	BI-212
02E-0022-009.002	Soil	URS10819	HPGe	02E0022-009	MH1-MH2 Stgple E.	BI-214
02E-0022-009.002	Soil	URS10819	HPGe	02E0022-009	MH1-MH2 Stgple E.	BI-214
02E-0022-009.002	Soil	URS10819	HPGe	02E0022-009	MH1-MH2 Stgple E.	PO-210
02E-0022-009.002	Soil	URS10819	HPGe	02E0022-009	MH1-MH2 Stgple E.	PO-210
02E-0022-009.002	Soil	URS10819	HPGe	02E0022-009	MH1-MH2 Stgple E.	RA-226
02E-0022-009.002	Soil	URS10819	HPGe	02E0022-009	MH1-MH2 Stgple E.	RA-226
02E-0022-009.002	Soil	URS10819	HPGe	02E0022-009	MH1-MH2 Stgple E.	Th-231
02E-0022-009.002	Soil	URS10819	HPGe	02E0022-009	MH1-MH2 Stgple E.	Th-231
02E-0022-009.002	Soil	URS10819	HPGe	02E0022-009	MH1-MH2 Stgple E.	TL-208
02E-0022-009.002	Soil	URS10819	HPGe	02E0022-009	MH1-MH2 Stgple E.	TL-208

23

DATE	TIME	SOL	INSTRUMENT	METRIC CODE	FIELD NAME	LOCATION	ANALYTE	CONC.	RESULT	REMARKS	UNIT	VALUE
02E-0022-013.002	Sol	URS10B19	HPGe	02E0022-013	N MH-2 Stkple N	THORIUM-230	14269-63-7	0	pCi/g			0
02E-0022-013.002	Sol	URS10B19	HPGe	02E0022-013	N MH-2 Stkple N	Uranium-235	15117-98-1	0.172	pCi/g			0
02E-0022-013.002	Sol	URS10B19	HPGe	02E0022-013	N MH-2 Stkple N	Uranium-235	15117-98-1	0.172	pCi/g			0
02E-0022-013.002	Sol	URS10B19	HPGe	02E0022-013	N MH-2 Stkple N	Uranium-238	7440-61-1	0.907	pCi/g			0
02E-0022-013.002	Sol	URS10B19	HPGe	02E0022-013	N MH-2 Stkple N	Uranium-238	7440-61-1	0.907	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	AC-228	7440-34-8	1.43	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	AC-228	7440-34-8	1.43	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	BI-212	14913-49-6	1.06	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	BI-212	14913-49-6	1.06	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	BI-214	14733-03-0	0.567	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	BI-214	14733-03-0	0.567	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	K-40	13966-0-2	19	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	K-40	13966-0-2	19	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	PA-234	15100-28-4	0	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	PA-234	15100-28-4	0	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	PA-234M	15100-28-4m	0	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	PA-234M	15100-28-4m	0	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	PB-212	15062-94-1	1.32	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	PB-212	15062-94-1	1.32	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	PB-214	15067-28-4	0.821	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	PB-214	15067-28-4	0.821	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	PO-210	13981-52-7	0	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	PO-210	13981-52-7	0	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	RA-226	10031-23-9	2.25	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	RA-226	10031-23-9	2.25	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	Th-231	14932-40-2	0	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	Th-231	14932-40-2	0	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	TL-208	14913-50-9	0.467	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	TL-208	14913-50-9	0.467	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	Americium-241	14596-10-2	0	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	Americium-241	14596-10-2	0	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	CESIUM-134	13967-70-9	0	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	CESIUM-134	13967-70-9	0	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	THORIUM-230	14269-63-7	0	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	THORIUM-230	14269-63-7	0	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	Uranium-235	15117-98-1	0	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	Uranium-235	15117-98-1	0	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	Uranium-238	7440-61-1	1.79	pCi/g			0
02E-0022-014.002	Sol	URS10B19	HPGe	02E0022-014	N MH-2 Stkple M	Uranium-238	7440-61-1	1.79	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	AC-228	7440-34-8	1.86	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	AC-228	7440-34-8	1.86	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	BI-212	14913-49-6	1.85	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	BI-212	14913-49-6	1.85	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	BI-214	14733-03-0	0.753	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	BI-214	14733-03-0	0.753	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	K-40	13966-0-2	18.5	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	K-40	13966-0-2	18.5	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	PA-234	15100-28-4	0	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	PA-234	15100-28-4	0	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	PA-234M	15100-28-4m	0	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	PA-234M	15100-28-4m	0	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	PB-212	15062-94-1	1.74	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	PB-212	15062-94-1	1.74	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	PB-214	15067-28-4	0.683	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	PB-214	15067-28-4	0.683	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	PO-210	13981-52-7	0	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	PO-210	13981-52-7	0	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	RA-226	10031-23-9	0	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	RA-226	10031-23-9	0	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	Th-231	14932-40-2	0	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	Th-231	14932-40-2	0	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	TL-208	14913-50-9	0.583	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	TL-208	14913-50-9	0.583	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	Americium-241	14596-10-2	0	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	Americium-241	14596-10-2	0	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	CESIUM-134	13967-70-9	0	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	CESIUM-134	13967-70-9	0	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	THORIUM-230	14269-63-7	0	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	THORIUM-230	14269-63-7	0	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	Uranium-235	15117-98-1	0.161	pCi/g			0
02E-0022-015.002	Sol	URS10B19	HPGe	02E0022-015	N MH-2 Stkple S	Uranium-235	15117-98-1	0.161	pCi/g			0

26

[illegible]

28

29

100-5
Analytical Data

Sample Name	Matrix	LOC	ANALYTICAL METHOD CODE	FIELD SAMPLE NUMBER	LOCATION	ANALYST	CASINO	RESULT	RESULT UNITS	LAB QUAL	VAL QUAL	LAB CODE	DATA	REMARKS
02E0015-001.001	Soil	PEP-A-007	SW-846 8082	02E0015-001	BT39-A001	AROCLOR-1016	12674-11-2	35	UG/KG	U	V			3.7
02E0015-001.001	Soil	PEP-A-007	SW-846 8082	02E0015-001	BT39-A001	AROCLOR-1221	11104-28-2	35	UG/KG	U	V			7.4
02E0015-001.001	Soil	PEP-A-007	SW-846 8082	02E0015-001	BT39-A001	AROCLOR-1232	11141-16-5	35	UG/KG	U	V			9.3
02E0015-001.001	Soil	PEP-A-007	SW-846 8082	02E0015-001	BT39-A001	AROCLOR-1242	53469-21-9	35	UG/KG	U	V			9
02E0015-001.001	Soil	PEP-A-007	SW-846 8082	02E0015-001	BT39-A001	AROCLOR-1248	12672-29-6	35	UG/KG	U	V			6.5
02E0015-001.001	Soil	PEP-A-007	SW-846 8082	02E0015-001	BT39-A001	AROCLOR-1254	11097-69-1	22	UG/KG	J	V			6.5
02E0015-001.001	Soil	PEP-A-007	SW-846 8082	02E0015-001	BT39-A001	AROCLOR-1260	11096-82-5	14	UG/KG	J	V			5.2
02E0015-001.001	Soil	PEP-A-007	SW-846 8082	02E0015-001	BT39-A001	DECACHLOROBIPHENYL	2051-24-3	102	%REC					
02E0015-001.001	Soil	PEP-A-007	SW-846 8082	02E0015-001	BT39-A001	TETRACHLORO-M-XYLENE	877-09-8	82	%REC					
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	1234678-HPCDD	35822-46-9	11	PG/G	B	V			0
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	1234678-HPCDD	35822-46-9	74	%REC	B				
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	1234678-HPCDD	35822-46-9	78	%REC	B				
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	1234678-HPCDF	67562-39-4	6.2	PG/G	B	V			0
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	1234678-HPCDF	67562-39-4	75	%REC	B				
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	1234678-HPCDF	67562-39-4	76	%REC	B				
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	123478-HXCDD	39227-28-6	0.23	PG/G	BJ	JB	107		0
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	123478-HXCDD	39227-28-6	77	%REC	B				
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	123478-HXCDF	70648-26-9	0.68	PG/G	BJ	JB	107		0
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	123478-HXCDF	70648-26-9	79	%REC	B				
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	123478-HXCDF	70648-26-9	80	%REC	B				
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	1234789-HPCDF	55673-89-7	0.15	PG/G	U	V			0
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	1234789-HPCDF	55673-89-7	72	%REC	B				
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	1234789-HPCDF	55673-89-7	78	%REC	B				
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	123678-HXCDD	57653-85-7	0.56	PG/G	J	V			0
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	123678-HXCDD	57653-85-7	78	%REC					
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	123678-HXCDD	57653-85-7	81	%REC					
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	123678-HXCDF	57117-44-9	0.9	PG/G	BJ	JB	107		0
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	123678-HXCDF	57117-44-9	80	%REC	B				
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	123678-HXCDF	57117-44-9	82	%REC	B				
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	12378-PECDD	40321-76-4	0.56	PG/G	J	V			0
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	12378-PECDD	40321-76-4	80	%REC					
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	12378-PECDD	40321-76-4	82	%REC					
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	12378-PECDF	57117-41-6	0.79	PG/G	J	V			0
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	12378-PECDF	57117-41-6	82	%REC					
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	12378-PECDF	57117-41-6	85	%REC					
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	123789-HXCDD	19408-74-3	0.45	PG/G	J	V			0

100-5
Analytical Data

Sample Name	Matrix	Lab	ANALYTICAL METHOD	FIELD SAMPLE NO.	LOCATION	ANALYTE	CASINO	RESULT	RESULT UNITS	LAB	AS	DATE	TIME	ANALYST
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	123789-HXCDD	19408-74-3	75	%REC					
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	123789-HXCDD	19408-74-3	78	%REC					
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	123789-HXCDF	72918-21-9	0.095	PG/G	U	V			0
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	123789-HXCDF	72918-21-9	80	%REC	B				
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	123789-HXCDF	72918-21-9	81	%REC	B				
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	234678-HXCDF	60851-34-5	0.34	PG/G	BJ	V			0
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	234678-HXCDF	60851-34-5	78	%REC	B				
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	234678-HXCDF	60851-34-5	84	%REC	B				
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	23478-PECDF	57117-31-4	0.56	PG/G	J	V			0
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	23478-PECDF	57117-31-4	79	%REC					
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	23478-PECDF	57117-31-4	80	%REC					
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	2378-TCDF	51207-31-9	3.6	PG/G		V			0
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	2378-TCDF	51207-31-9	82	%REC					
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	2378-TCDF	51207-31-9	88	%REC					
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	DIOXIN	1746-01-6	3.5	PG/G		V			0
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	DIOXIN	1746-01-6	81	%REC					
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	DIOXIN	1746-01-6	82	%REC					
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	OCDD	3268-87-9	74	%REC	B				
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	OCDD	3268-87-9	80	%REC	B				
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	OCDD	3268-87-9	84	PG/G	B	V			0
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	OCDF	39001-02-0	5.1	PG/G	BJ	JB	107		0
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	OCDF	39001-02-0	76	%REC	B				
02E0015-001.002	Soil	TSK-A-003	SW-846 8290	02E0015-001	BT39-A001	OCDF	39001-02-0	77	%REC	B				
02E0015-002.001	Soil	PEP-A-007	SW-846 8082	02E0015-002	BT39-A002	AROCLOR-1016	12674-11-2	39	UG/KG	U	V			4
02E0015-002.001	Soil	PEP-A-007	SW-846 8082	02E0015-002	BT39-A002	AROCLOR-1221	11104-28-2	39	UG/KG	U	V			8.2
02E0015-002.001	Soil	PEP-A-007	SW-846 8082	02E0015-002	BT39-A002	AROCLOR-1232	11141-16-5	39	UG/KG	U	V			10
02E0015-002.001	Soil	PEP-A-007	SW-846 8082	02E0015-002	BT39-A002	AROCLOR-1242	53469-21-9	39	UG/KG	U	V			9.9
02E0015-002.001	Soil	PEP-A-007	SW-846 8082	02E0015-002	BT39-A002	AROCLOR-1248	12672-29-6	39	UG/KG	U	V			7.1
02E0015-002.001	Soil	PEP-A-007	SW-846 8082	02E0015-002	BT39-A002	AROCLOR-1254	11097-69-1	39	UG/KG	U	V			7.2
02E0015-002.001	Soil	PEP-A-007	SW-846 8082	02E0015-002	BT39-A002	AROCLOR-1260	11096-82-5	13	UG/KG	J	V			5.7
02E0015-002.001	Soil	PEP-A-007	SW-846 8082	02E0015-002	BT39-A002	DECACHLOROBIPHENYL	2051-24-3	106	%REC					
02E0015-002.001	Soil	PEP-A-007	SW-846 8082	02E0015-002	BT39-A002	TETRACHLORO-M-XYLENE	877-09-8	69	%REC					
02E0015-002.002	Soil	TSK-A-003	SW-846 8290	02E0015-002	BT39-A002	1234678-HPCDD	35822-46-9	14	PG/G	B	V			0
02E0015-002.002	Soil	TSK-A-003	SW-846 8290	02E0015-002	BT39-A002	1234678-HPCDF	67562-39-4	3.8	PG/G	BJ	V			0
02E0015-002.002	Soil	TSK-A-003	SW-846 8290	02E0015-002	BT39-A002	123478-HXCDD	39227-28-6	0.22	PG/G	BJ	JB	107		0
02E0015-002.002	Soil	TSK-A-003	SW-846 8290	02E0015-002	BT39-A002	123478-HXCDF	70648-26-9	0.45	PG/G	BJ	JB	107		0

100-5
Analytical Data

Sample Name	Matrix	Lab	ANALY METHOD CODE	FIELD CAMP NUM	LOCATION	ANALYTE	CASINO	RESULT	RESULT UNITS	LAB QUAL	VA QUAL	VA CODE	LAB	RES
02E0015-002.002	Soil	TSK-A-003	SW-846 8290	02E0015-002	BT39-A002	1234789-HPCDF	55673-89-7	0.34	PG/G	BJ	JB	107		0
02E0015-002.002	Soil	TSK-A-003	SW-846 8290	02E0015-002	BT39-A002	123678-HXCDD	57653-85-7	0.56	PG/G	J	V			0
02E0015-002.002	Soil	TSK-A-003	SW-846 8290	02E0015-002	BT39-A002	123678-HXCDF	57117-44-9	0.67	PG/G	BJ	JB	107		0
02E0015-002.002	Soil	TSK-A-003	SW-846 8290	02E0015-002	BT39-A002	12378-PECDD	40321-76-4	0.45	PG/G	J	V			0
02E0015-002.002	Soil	TSK-A-003	SW-846 8290	02E0015-002	BT39-A002	12378-PECDF	57117-41-6	0.14	PG/G	U	V			0
02E0015-002.002	Soil	TSK-A-003	SW-846 8290	02E0015-002	BT39-A002	123789-HXCDD	19408-74-3	0.79	PG/G	J	V			0
02E0015-002.002	Soil	TSK-A-003	SW-846 8290	02E0015-002	BT39-A002	123789-HXCDF	72918-21-9	0.22	PG/G	BJ	JB	107		0
02E0015-002.002	Soil	TSK-A-003	SW-846 8290	02E0015-002	BT39-A002	234678-HXCDF	60851-34-5	0.34	PG/G	BJ	V			0
02E0015-002.002	Soil	TSK-A-003	SW-846 8290	02E0015-002	BT39-A002	23478-PECDF	57117-31-4	0.14	PG/G	U	V			0
02E0015-002.002	Soil	TSK-A-003	SW-846 8290	02E0015-002	BT39-A002	2378-TCDF	51207-31-9	0.79	PG/G	J	V			0
02E0015-002.002	Soil	TSK-A-003	SW-846 8290	02E0015-002	BT39-A002	DIOXIN	1746-01-6	1.6	PG/G		V			0
02E0015-002.002	Soil	TSK-A-003	SW-846 8290	02E0015-002	BT39-A002	OCDD	3268-87-9	76	PG/G	B	V			0
02E0015-002.002	Soil	TSK-A-003	SW-846 8290	02E0015-002	BT39-A002	OCDF	39001-02-0	5.5	PG/G	BJ	JB	107		0
02E0015-003.001	Soil	PEP-A-007	SW-846 8082	02E0015-003	BT39-A003	AROCLOR-1016	12674-11-2	36	UG/KG	U	V			3.8
02E0015-003.001	Soil	PEP-A-007	SW-846 8082	02E0015-003	BT39-A003	AROCLOR-1221	11104-28-2	36	UG/KG	U	V			7.6
02E0015-003.001	Soil	PEP-A-007	SW-846 8082	02E0015-003	BT39-A003	AROCLOR-1232	11141-16-5	36	UG/KG	U	V			9.5
02E0015-003.001	Soil	PEP-A-007	SW-846 8082	02E0015-003	BT39-A003	AROCLOR-1242	53469-21-9	36	UG/KG	U	V			9.2
02E0015-003.001	Soil	PEP-A-007	SW-846 8082	02E0015-003	BT39-A003	AROCLOR-1248	12672-29-6	42	UG/KG		V			6.7
02E0015-003.001	Soil	PEP-A-007	SW-846 8082	02E0015-003	BT39-A003	AROCLOR-1254	11097-69-1	30	UG/KG	J	V			6.7
02E0015-003.001	Soil	PEP-A-007	SW-846 8082	02E0015-003	BT39-A003	AROCLOR-1260	11096-82-5	36	UG/KG	U	V			5.3
02E0015-003.001	Soil	PEP-A-007	SW-846 8082	02E0015-003	BT39-A003	DECACHLOROBIPHENYL	2051-24-3	106	%REC					
02E0015-003.001	Soil	PEP-A-007	SW-846 8082	02E0015-003	BT39-A003	TETRACHLORO-M-XYLENE	877-09-8	85	%REC					
02E0015-003.002	Soil	TSK-A-003	SW-846 8290	02E0015-003	BT39-A003	1234678-HPCDD	35822-46-9	33	PG/G	B	V			0
02E0015-003.002	Soil	TSK-A-003	SW-846 8290	02E0015-003	BT39-A003	1234678-HPCDF	67562-39-4	8.7	PG/G	B	V			0
02E0015-003.002	Soil	TSK-A-003	SW-846 8290	02E0015-003	BT39-A003	123478-HXCDD	39227-28-6	0.47	PG/G	BJ	JB	107		0
02E0015-003.002	Soil	TSK-A-003	SW-846 8290	02E0015-003	BT39-A003	123478-HXCDF	70648-26-9	1.5	PG/G	BJ	JB	107		0
02E0015-003.002	Soil	TSK-A-003	SW-846 8290	02E0015-003	BT39-A003	1234789-HPCDF	55673-89-7	0.27	PG/G	U	V			0
02E0015-003.002	Soil	TSK-A-003	SW-846 8290	02E0015-003	BT39-A003	123678-HXCDD	57653-85-7	1.2	PG/G	J	V			0
02E0015-003.002	Soil	TSK-A-003	SW-846 8290	02E0015-003	BT39-A003	123678-HXCDF	57117-44-9	1.2	PG/G	BJ	JB	107		0
02E0015-003.002	Soil	TSK-A-003	SW-846 8290	02E0015-003	BT39-A003	12378-PECDD	40321-76-4	0.82	PG/G	J	V			0
02E0015-003.002	Soil	TSK-A-003	SW-846 8290	02E0015-003	BT39-A003	12378-PECDF	57117-41-6	4.3	PG/G	J	V			0
02E0015-003.002	Soil	TSK-A-003	SW-846 8290	02E0015-003	BT39-A003	123789-HXCDD	19408-74-3	1.1	PG/G	J	V			0
02E0015-003.002	Soil	TSK-A-003	SW-846 8290	02E0015-003	BT39-A003	123789-HXCDF	72918-21-9	0.15	PG/G	U	V			0
02E0015-003.002	Soil	TSK-A-003	SW-846 8290	02E0015-003	BT39-A003	234678-HXCDF	60851-34-5	0.82	PG/G	BJ	V			0
02E0015-003.002	Soil	TSK-A-003	SW-846 8290	02E0015-003	BT39-A003	23478-PECDF	57117-31-4	1.9	PG/G	J	V			0
02E0015-003.002	Soil	TSK-A-003	SW-846 8290	02E0015-003	BT39-A003	2378-TCDF	51207-31-9	12	PG/G		V			0

100-5
Analytical Data

Sample Name	Media	SC	ANALY. METHOD CODE	HELD. COMPUND	LOCATION	ANALYSIS	CASINO.	RESULT	RESID. UNITS	LAB. QUAL.	VA. QUAL.	MC. CODE	MDA	RL
02E0015-003.002	Soil	TSK-A-003	SW-846 8290	02E0015-003	BT39-A003	DIOXIN	1746-01-6	6.6	PG/G		V			0
02E0015-003.002	Soil	TSK-A-003	SW-846 8290	02E0015-003	BT39-A003	OCDD	3268-87-9	290	PG/G	B	V			0
02E0015-003.002	Soil	TSK-A-003	SW-846 8290	02E0015-003	BT39-A003	OCDF	39001-02-0	11	PG/G	BJ	V			0
02E0015-004.001	Soil	PEP-A-007	SW-846 8082	02E0015-004	BT39-A004	AROCLOR-1016	12674-11-2	36	UG/KG	U	V			3.7
02E0015-004.001	Soil	PEP-A-007	SW-846 8082	02E0015-004	BT39-A004	AROCLOR-1221	11104-28-2	36	UG/KG	U	V			7.5
02E0015-004.001	Soil	PEP-A-007	SW-846 8082	02E0015-004	BT39-A004	AROCLOR-1232	11141-16-5	36	UG/KG	U	V			9.4
02E0015-004.001	Soil	PEP-A-007	SW-846 8082	02E0015-004	BT39-A004	AROCLOR-1242	53469-21-9	36	UG/KG	U	V			9.1
02E0015-004.001	Soil	PEP-A-007	SW-846 8082	02E0015-004	BT39-A004	AROCLOR-1248	12672-29-6	36	UG/KG	U	V			6.6
02E0015-004.001	Soil	PEP-A-007	SW-846 8082	02E0015-004	BT39-A004	AROCLOR-1254	11097-69-1	36	UG/KG	U	V			6.6
02E0015-004.001	Soil	PEP-A-007	SW-846 8082	02E0015-004	BT39-A004	AROCLOR-1260	11096-82-5	36	UG/KG	U	V			5.2
02E0015-004.001	Soil	PEP-A-007	SW-846 8082	02E0015-004	BT39-A004	DECACHLOROBIPHENYL	2051-24-3	87	%REC					
02E0015-004.001	Soil	PEP-A-007	SW-846 8082	02E0015-004	BT39-A004	TETRACHLORO-M-XYLENE	877-09-8	78	%REC					
02E0015-004.002	Soil	TSK-A-003	SW-846 8290	02E0015-004	BT39-A004	1234678-HPCDD	35822-46-9	2.8	PG/G	BJ	V			0
02E0015-004.002	Soil	TSK-A-003	SW-846 8290	02E0015-004	BT39-A004	1234678-HPCDF	67562-39-4	1.4	PG/G	BJ	JB	107		0
02E0015-004.002	Soil	TSK-A-003	SW-846 8290	02E0015-004	BT39-A004	123478-HXCDD	39227-28-6	0.25	PG/G	U	V			0
02E0015-004.002	Soil	TSK-A-003	SW-846 8290	02E0015-004	BT39-A004	123478-HXCDF	70648-26-9	0.12	PG/G	U	V			0
02E0015-004.002	Soil	TSK-A-003	SW-846 8290	02E0015-004	BT39-A004	1234789-HPCDF	55673-89-7	0.35	PG/G	U	V			0
02E0015-004.002	Soil	TSK-A-003	SW-846 8290	02E0015-004	BT39-A004	123678-HXCDD	57653-85-7	0.23	PG/G	U	V			0
02E0015-004.002	Soil	TSK-A-003	SW-846 8290	02E0015-004	BT39-A004	123678-HXCDF	57117-44-9	0.11	PG/G	U	V			0
02E0015-004.002	Soil	TSK-A-003	SW-846 8290	02E0015-004	BT39-A004	12378-PECDD	40321-76-4	0.25	PG/G	U	V			0
02E0015-004.002	Soil	TSK-A-003	SW-846 8290	02E0015-004	BT39-A004	12378-PECDF	57117-41-6	0.23	PG/G	U	V			0
02E0015-004.002	Soil	TSK-A-003	SW-846 8290	02E0015-004	BT39-A004	123789-HXCDD	19408-74-3	0.24	PG/G	U	V			0
02E0015-004.002	Soil	TSK-A-003	SW-846 8290	02E0015-004	BT39-A004	123789-HXCDF	72918-21-9	0.14	PG/G	U	V			0
02E0015-004.002	Soil	TSK-A-003	SW-846 8290	02E0015-004	BT39-A004	234678-HXCDF	60851-34-5	0.13	PG/G	U	V			0
02E0015-004.002	Soil	TSK-A-003	SW-846 8290	02E0015-004	BT39-A004	23478-PECDF	57117-31-4	0.22	PG/G	U	V			0
02E0015-004.002	Soil	TSK-A-003	SW-846 8290	02E0015-004	BT39-A004	2378-TCDF	51207-31-9	0.76	PG/G	J	V			0
02E0015-004.002	Soil	TSK-A-003	SW-846 8290	02E0015-004	BT39-A004	DIOXIN	1746-01-6	1.6	PG/G		V			0
02E0015-004.002	Soil	TSK-A-003	SW-846 8290	02E0015-004	BT39-A004	OCDD	3268-87-9	18	PG/G	B	V			0
02E0015-004.002	Soil	TSK-A-003	SW-846 8290	02E0015-004	BT39-A004	OCDF	39001-02-0	2	PG/G	BJ	JB	107		0
02E0015-005.001	Soil	PEP-A-007	SW-846 8082	02E0015-005	BT38-A001	AROCLOR-1016	12674-11-2	35	UG/KG	U	V			3.6
02E0015-005.001	Soil	PEP-A-007	SW-846 8082	02E0015-005	BT38-A001	AROCLOR-1221	11104-28-2	35	UG/KG	U	V			7.4
02E0015-005.001	Soil	PEP-A-007	SW-846 8082	02E0015-005	BT38-A001	AROCLOR-1232	11141-16-5	35	UG/KG	U	V			9.2
02E0015-005.001	Soil	PEP-A-007	SW-846 8082	02E0015-005	BT38-A001	AROCLOR-1242	53469-21-9	35	UG/KG	U	V			8.9
02E0015-005.001	Soil	PEP-A-007	SW-846 8082	02E0015-005	BT38-A001	AROCLOR-1248	12672-29-6	32	UG/KG	J	V			6.4
02E0015-005.001	Soil	PEP-A-007	SW-846 8082	02E0015-005	BT38-A001	AROCLOR-1254	11097-69-1	29	UG/KG	J	V			6.5
02E0015-005.001	Soil	PEP-A-007	SW-846 8082	02E0015-005	BT38-A001	AROCLOR-1260	11096-82-5	17	UG/KG	J	V			5.1

100-5
Analytical Data

PROJECT NO.	MEDIA	LOC	ANAL. METH. CODE	FIELD SAMPLE NO.	LOCATION	ANALYTE	CAS NO.	RESULT	RESULT UNITS	QUAL	Q.C.	CODE	LAB	DATE
02E0015-005.001	Soil	PEP-A-007	SW-846 8082	02E0015-005	BT38-A001	DECACHLOROBIPHENYL	2051-24-3	102	%REC					
02E0015-005.001	Soil	PEP-A-007	SW-846 8082	02E0015-005	BT38-A001	TETRACHLORO-M-XYLENE	877-09-8	87	%REC					
02E0015-005.002	Soil	TSK-A-003	SW-846 8290	02E0015-005	BT38-A001	1234678-HPCDD	35822-46-9	23	PG/G	B	V			0
02E0015-005.002	Soil	TSK-A-003	SW-846 8290	02E0015-005	BT38-A001	1234678-HPCDF	67562-39-4	5.7	PG/G	B	V			0
02E0015-005.002	Soil	TSK-A-003	SW-846 8290	02E0015-005	BT38-A001	123478-HXCDD	39227-28-6	0.3	PG/G	U	V			0
02E0015-005.002	Soil	TSK-A-003	SW-846 8290	02E0015-005	BT38-A001	123478-HXCDF	70648-26-9	0.54	PG/G	BJ	JB	107		0
02E0015-005.002	Soil	TSK-A-003	SW-846 8290	02E0015-005	BT38-A001	1234789-HPCDF	55673-89-7	0.33	PG/G	U	V			0
02E0015-005.002	Soil	TSK-A-003	SW-846 8290	02E0015-005	BT38-A001	123678-HXCDD	57653-85-7	0.97	PG/G	J	V			0
02E0015-005.002	Soil	TSK-A-003	SW-846 8290	02E0015-005	BT38-A001	123678-HXCDF	57117-44-9	0.43	PG/G	BJ	JB	107		0
02E0015-005.002	Soil	TSK-A-003	SW-846 8290	02E0015-005	BT38-A001	12378-PECDD	40321-76-4	0.65	PG/G	J	V			0
02E0015-005.002	Soil	TSK-A-003	SW-846 8290	02E0015-005	BT38-A001	12378-PECDF	57117-41-6	1.2	PG/G	J	V			0
02E0015-005.002	Soil	TSK-A-003	SW-846 8290	02E0015-005	BT38-A001	123789-HXCDD	19408-74-3	0.28	PG/G	U	V			0
02E0015-005.002	Soil	TSK-A-003	SW-846 8290	02E0015-005	BT38-A001	123789-HXCDF	72918-21-9	0.16	PG/G	U	V			0
02E0015-005.002	Soil	TSK-A-003	SW-846 8290	02E0015-005	BT38-A001	234678-HXCDF	60851-34-5	0.43	PG/G	BJ	V			0
02E0015-005.002	Soil	TSK-A-003	SW-846 8290	02E0015-005	BT38-A001	23478-PECDF	57117-31-4	0.65	PG/G	J	V			0
02E0015-005.002	Soil	TSK-A-003	SW-846 8290	02E0015-005	BT38-A001	2378-TCDF	51207-31-9	3.8	PG/G		V			0
02E0015-005.002	Soil	TSK-A-003	SW-846 8290	02E0015-005	BT38-A001	DIOXIN	1746-01-6	5.6	PG/G		V			0
02E0015-005.002	Soil	TSK-A-003	SW-846 8290	02E0015-005	BT38-A001	OCDD	3268-87-9	180	PG/G	B	V			0
02E0015-005.002	Soil	TSK-A-003	SW-846 8290	02E0015-005	BT38-A001	OCDF	39001-02-0	8.9	PG/G	BJ	V			0
02E0015-006.001	Soil	PEP-A-007	SW-846 8082	02E0015-006	BT38-A002	AROCLOR-1016	12674-11-2	19	UG/KG	J	V			3.6
02E0015-006.001	Soil	PEP-A-007	SW-846 8082	02E0015-006	BT38-A002	AROCLOR-1221	11104-28-2	35	UG/KG	U	V			7.3
02E0015-006.001	Soil	PEP-A-007	SW-846 8082	02E0015-006	BT38-A002	AROCLOR-1232	11141-16-5	35	UG/KG	U	V			9.1
02E0015-006.001	Soil	PEP-A-007	SW-846 8082	02E0015-006	BT38-A002	AROCLOR-1242	53469-21-9	35	UG/KG	U	V			8.8
02E0015-006.001	Soil	PEP-A-007	SW-846 8082	02E0015-006	BT38-A002	AROCLOR-1248	12672-29-6	35	UG/KG		V			6.4
02E0015-006.001	Soil	PEP-A-007	SW-846 8082	02E0015-006	BT38-A002	AROCLOR-1254	11097-69-1	35	UG/KG	U	V			6.4
02E0015-006.001	Soil	PEP-A-007	SW-846 8082	02E0015-006	BT38-A002	AROCLOR-1260	11096-82-5	35	UG/KG	U	UJ	141		5.1
02E0015-006.001	Soil	PEP-A-007	SW-846 8082	02E0015-006	BT38-A002	DECACHLOROBIPHENYL	2051-24-3	62	%REC					
02E0015-006.001	Soil	PEP-A-007	SW-846 8082	02E0015-006	BT38-A002	TETRACHLORO-M-XYLENE	877-09-8	61	%REC					
02E0015-006.002	Soil	TSK-A-003	SW-846 8290	02E0015-006	BT38-A002	1234678-HPCDD	35822-46-9	13	PG/G	B	V			0
02E0015-006.002	Soil	TSK-A-003	SW-846 8290	02E0015-006	BT38-A002	1234678-HPCDF	67562-39-4	3.5	PG/G	BJ	V			0
02E0015-006.002	Soil	TSK-A-003	SW-846 8290	02E0015-006	BT38-A002	123478-HXCDD	39227-28-6	0.38	PG/G	U	V			0
02E0015-006.002	Soil	TSK-A-003	SW-846 8290	02E0015-006	BT38-A002	123478-HXCDF	70648-26-9	0.53	PG/G	BJ	JB	107		0
02E0015-006.002	Soil	TSK-A-003	SW-846 8290	02E0015-006	BT38-A002	1234789-HPCDF	55673-89-7	0.51	PG/G	U	V			0
02E0015-006.002	Soil	TSK-A-003	SW-846 8290	02E0015-006	BT38-A002	123678-HXCDD	57653-85-7	0.84	PG/G	J	V			0
02E0015-006.002	Soil	TSK-A-003	SW-846 8290	02E0015-006	BT38-A002	123678-HXCDF	57117-44-9	0.53	PG/G	BJ	V			0
02E0015-006.002	Soil	TSK-A-003	SW-846 8290	02E0015-006	BT38-A002	12378-PECDD	40321-76-4	0.63	PG/G	J	V			0

100-5
Analytical Data

Sample No.	Matrix	ID	ANALYTICAL METHOD CODE	FIELD SAMPLE NO.	LOCATION	ANALYST	LAB No.	RESULT	RESULT UNITS	QUAL	VAL	VAL	VAL	VAL
02E0015-006.002	Soil	TSK-A-003	SW-846 8290	02E0015-006	BT38-A002	12378-PECDF	57117-41-6	0.3	PG/G	U	V			0
02E0015-006.002	Soil	TSK-A-003	SW-846 8290	02E0015-006	BT38-A002	123789-HXCDD	19408-74-3	0.63	PG/G	J	V			0
02E0015-006.002	Soil	TSK-A-003	SW-846 8290	02E0015-006	BT38-A002	123789-HXCDF	72918-21-9	0.26	PG/G	U	V			0
02E0015-006.002	Soil	TSK-A-003	SW-846 8290	02E0015-006	BT38-A002	234678-HXCDF	60851-34-5	0.23	PG/G	U	V			0
02E0015-006.002	Soil	TSK-A-003	SW-846 8290	02E0015-006	BT38-A002	23478-PECDF	57117-31-4	0.42	PG/G	J	V			0
02E0015-006.002	Soil	TSK-A-003	SW-846 8290	02E0015-006	BT38-A002	2378-TCDF	51207-31-9	2.6	PG/G		V			0
02E0015-006.002	Soil	TSK-A-003	SW-846 8290	02E0015-006	BT38-A002	DIOXIN	1746-01-6	3.5	PG/G		V			0
02E0015-006.002	Soil	TSK-A-003	SW-846 8290	02E0015-006	BT38-A002	OCDD	3268-87-9	88	PG/G	B	V			0
02E0015-006.002	Soil	TSK-A-003	SW-846 8290	02E0015-006	BT38-A002	OCDF	39001-02-0	16	PG/G	B	V			0
02E0015-007.001	Soil	PEP-A-007	SW-846 8082	02E0015-007	BT38-A002	AROCLOR-1016	12674-11-2	13	UG/KG	J	V			3.6
02E0015-007.001	Soil	PEP-A-007	SW-846 8082	02E0015-007	BT38-A002	AROCLOR-1221	11104-28-2	35	UG/KG	U	V			7.4
02E0015-007.001	Soil	PEP-A-007	SW-846 8082	02E0015-007	BT38-A002	AROCLOR-1232	11141-16-5	35	UG/KG	U	V			9.3
02E0015-007.001	Soil	PEP-A-007	SW-846 8082	02E0015-007	BT38-A002	AROCLOR-1242	53469-21-9	23	UG/KG	J	V			9
02E0015-007.001	Soil	PEP-A-007	SW-846 8082	02E0015-007	BT38-A002	AROCLOR-1248	12872-29-6	17	UG/KG	J	V			6.5
02E0015-007.001	Soil	PEP-A-007	SW-846 8082	02E0015-007	BT38-A002	AROCLOR-1254	11097-69-1	6.9	UG/KG	J	V			6.5
02E0015-007.001	Soil	PEP-A-007	SW-846 8082	02E0015-007	BT38-A002	AROCLOR-1260	11096-82-5	35	UG/KG	U	UJ	141		5.1
02E0015-007.001	Soil	PEP-A-007	SW-846 8082	02E0015-007	BT38-A002	DECACHLOROBIPHENYL	2051-24-3	65	%REC					
02E0015-007.001	Soil	PEP-A-007	SW-846 8082	02E0015-007	BT38-A002	TETRACHLORO-M-XYLENE	877-09-8	63	%REC					
02E0015-007.002	Soil	TSK-A-003	SW-846 8290	02E0015-007	BT38-A002	1234678-HPCDD	35822-46-9	8.5	PG/G	B	V			0
02E0015-007.002	Soil	TSK-A-003	SW-846 8290	02E0015-007	BT38-A002	1234678-HPCDF	67562-39-4	3.4	PG/G	BJ	V			0
02E0015-007.002	Soil	TSK-A-003	SW-846 8290	02E0015-007	BT38-A002	123478-HXCDD	39227-28-6	0.26	PG/G	U	V			0
02E0015-007.002	Soil	TSK-A-003	SW-846 8290	02E0015-007	BT38-A002	123478-HXCDF	70648-26-9	0.67	PG/G	BJ	JB	107		0
02E0015-007.002	Soil	TSK-A-003	SW-846 8290	02E0015-007	BT38-A002	1234789-HPCDF	55673-89-7	0.32	PG/G	U	V			0
02E0015-007.002	Soil	TSK-A-003	SW-846 8290	02E0015-007	BT38-A002	123678-HXCDD	57653-85-7	0.67	PG/G	J	V			0
02E0015-007.002	Soil	TSK-A-003	SW-846 8290	02E0015-007	BT38-A002	123678-HXCDF	57117-44-9	0.55	PG/G	BJ	JB	107		0
02E0015-007.002	Soil	TSK-A-003	SW-846 8290	02E0015-007	BT38-A002	12378-PECDD	40321-76-4	0.67	PG/G	J	V			0
02E0015-007.002	Soil	TSK-A-003	SW-846 8290	02E0015-007	BT38-A002	12378-PECDF	57117-41-6	0.89	PG/G	J	V			0
02E0015-007.002	Soil	TSK-A-003	SW-846 8290	02E0015-007	BT38-A002	123789-HXCDD	19408-74-3	0.67	PG/G	J	V			0
02E0015-007.002	Soil	TSK-A-003	SW-846 8290	02E0015-007	BT38-A002	123789-HXCDF	72918-21-9	0.18	PG/G	U	V			0
02E0015-007.002	Soil	TSK-A-003	SW-846 8290	02E0015-007	BT38-A002	234678-HXCDF	60851-34-5	0.44	PG/G	BJ	V			0
02E0015-007.002	Soil	TSK-A-003	SW-846 8290	02E0015-007	BT38-A002	23478-PECDF	57117-31-4	0.44	PG/G	J	V			0
02E0015-007.002	Soil	TSK-A-003	SW-846 8290	02E0015-007	BT38-A002	2378-TCDF	51207-31-9	4.2	PG/G		V			0
02E0015-007.002	Soil	TSK-A-003	SW-846 8290	02E0015-007	BT38-A002	DIOXIN	1746-01-6	6.8	PG/G		V			0
02E0015-007.002	Soil	TSK-A-003	SW-846 8290	02E0015-007	BT38-A002	OCDD	3268-87-9	57	PG/G	B	V			0
02E0015-007.002	Soil	TSK-A-003	SW-846 8290	02E0015-007	BT38-A002	OCDF	39001-02-0	3.7	PG/G	BJ	JB	107		0

100-611
Analytical Data

FILE NO.	DEPTH	LOC	ANALY. METHOD CODE	FIELD SAMPLE NO.	LOCATION	ANALYSIS	CASINO	RESULT	RESULT UNITS	LAB QUAL	VAL. CODE	QA CODE	MBP	RD
02E0001-011.001	Soil	MIS-A-004	SW9040B CHAPTER 7.	02E0001-011	BU38-0010	CORROSIVITY FOR LIQUID WASTE	261.22-A-1	8.4	S.U.		1			
02E0001-011.001	Soil	MIS-A-004	SW9040B CHAPTER 7.	02E0001-011	BU38-0010	CORROSIVITY FOR LIQUID WASTE	261.22-A-1	8.4	S.U.		V1			
02E0001-012.001	Soil	MIS-A-004	SW9040B CHAPTER 7.	02E0001-012	BU38-0012	CORROSIVITY FOR LIQUID WASTE	261.22-A-1	8.8	S.U.		V1			
02E0001-013.001	Soil	MIS-A-004	SW9040B CHAPTER 7.	02E0001-013	BU38-0013	CORROSIVITY FOR LIQUID WASTE	261.22-A-1	8.8	S.U.		V1			
02E0001-014.001	Soil	MIS-A-004	SW9040B CHAPTER 7.	02E0001-014	BU38-0014	CORROSIVITY FOR LIQUID WASTE	261.22-A-1	8.7	S.U.					
02E0001-015.001	Soil	MIS-A-004	SW9040B CHAPTER 7.	02E0001-015	BU38-0015	CORROSIVITY FOR LIQUID WASTE	261.22-A-1	8.8	S.U.		V1			
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	RA-226	10031-23-9	2.05	pCi/g					
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	RA-226	10031-23-9	2.05	pCi/g					0
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	K-40	13966-0-2	13.1	pCi/g					
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	K-40	13966-0-2	13.1	pCi/g					0
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	CS-137	13967-70-9	0	pCi/g					
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	CS-137	13967-70-9	0	pCi/g					0
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	PO-210	13981-52-7	0	pCi/g					
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	PO-210	13981-52-7	0	pCi/g					0
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	TH-230	14269-63-7	0	pCi/g					
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	TH-230	14269-63-7	0	pCi/g					0
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	AM-241	14596-10-2	0	pCi/g					4
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	AM-241	14596-10-2	0	pCi/g					0 4
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	BI-214	14733-03-0	0.525	pCi/g					
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	BI-214	14733-03-0	0.525	pCi/g					0
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	BI-212	14913-49-6	0.866	pCi/g					
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	BI-212	14913-49-6	0.866	pCi/g					0
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	TL-208	14913-50-9	0.378	pCi/g					
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	TL-208	14913-50-9	0.378	pCi/g					0
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	Th-231	14932-40-2	0	pCi/g					
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	Th-231	14932-40-2	0	pCi/g					0
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	PB-214	15067-28-4	0.528	pCi/g					
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	PB-214	15067-28-4	0.528	pCi/g					0
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	PB-212	15092-94-1	1.02	pCi/g					
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	PB-212	15092-94-1	1.02	pCi/g					0
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	PA-234	15100-28-4	0	pCi/g					
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	PA-234	15100-28-4	0	pCi/g					0
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	PA-234M	15100-28-4m	0	pCi/g					
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	PA-234M	15100-28-4m	0	pCi/g					0
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	U-235	15117-96-1	0	pCi/g					1
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	U-235	15117-96-1	0	pCi/g					0 1

130

100-611
Analytical Data

DATE	TYPE	LOC	ANALY METHOD CODE	FIELD SAMPLING	LOCATION	ANALYTE	CASINO	RESULT	UNITS	LAB QUAL	VAL QUAL	VAL CODE	MDA	RE
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	AC-228	7440-34-8	1.1	pCi/g					
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	AC-228	7440-34-8	1.1	pCi/g				0	
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	U238/234	7440-61-1	1.66	pCi/g					8
02E0022-007.002	Soil	URS10B19	HPGe	02E0022-007	BU38-0002	U238/234	7440-61-1	1.66	pCi/g				0	8

Location	Easting	Northing	Sample ID	SAMP COLLECT TYPE	Matrix	SED Actual	SED Actual	COMMENTS	BOTTLE NUM	Analytical Code	Lab Code
886			800-4		Soil				02E0096-016.002	Gamma Spec in Water	URS10B18
CI38-0001			800-4		Soil				02E0098-001.002	Total Metals by ICP	MET-A-023
CI38-0002			800-4		Soil				02E0096-002.002	Total Metals by ICP	MET-A-023
CI38-0002			800-4		Soil				02E0096-001.002	Total Metals by ICP	MET-A-023
CI38-0006			800-4		Soil				02E0096-004.002	Total Metals by ICP	MET-A-023
CI38-0006			800-4		Soil				02E0096-005.002	Total Metals by ICP	MET-A-023
CI38-0006			800-4		Soil				02E0096-005.004	Isotopic Am, Pu, U	ASP-A-004
CI38-0006			800-4		Soil				02E0096-004.004	Isotopic Am, Pu, U	ASP-A-004
CI38-0006			800-4		Soil				02E0096-003.002	Total Metals by ICP	MET-A-023
CI38-0008			800-4		Soil				02E0098-013.003	Total Metals by ICP	MET-A-023
CI38-0008			800-4		Soil				02E0098-012.002	Total Metals by ICP	MET-A-023
CI38-0011			800-4		Soil				02E0096-007.002	Total Metals by ICP	MET-A-023
CI38-0011			800-4		Soil				02E0096-006.002	Total Metals by ICP	MET-A-023
CI38-0012			800-4		Soil				02E0098-022.003	Total Metals by ICP	MET-A-023
CI38-0012			800-4		Soil				02E0098-023.003	Total Metals by ICP	MET-A-023
CI38-0012			800-4		Soil				02E0098-021.002	Total Metals by ICP	MET-A-023
CI38-0013			800-4		Soil				02E0098-018.003	Total Metals by ICP	MET-A-023
CI38-0013			800-4		Soil				02E0098-017.002	Total Metals by ICP	MET-A-023
CI38-0015			800-4		Soil				02E0096-013.002	Total Metals by ICP	MET-A-023
CI38-0015			800-4		Soil				02E0096-012.002	Total Metals by ICP	MET-A-023
CI38-0016			800-4		Soil				02E0096-009.002	Total Metals by ICP	MET-A-023
CI38-0016			800-4		Soil				02E0096-008.002	Total Metals by ICP	MET-A-023
CI38-0017			800-4		Soil				02E0098-020.003	Total Metals by ICP	MET-A-023
CI38-0017			800-4		Soil				02E0098-019.002	Total Metals by ICP	MET-A-023
CI38-0019			800-4		Soil				02E0099-002.004	Isotopic Am, Pu, U	ASP-A-004
CI38-0020			800-4		Soil				02E0096-015.002	Total Metals by ICP	MET-A-023
CI38-0020			800-4		Soil				02E0096-014.002	Total Metals by ICP	MET-A-023
CI38-0046			800-4		Soil				02E0080-005.001	Gamma Spectroscopy on Solids	URS10B19
CI38-H032			886	Grab	Soil	2	2.5	Below concrete floor	02E0020-002.004	Nitrite by Ion Chromatography	MIS-A-026
CI38-H032			886	Grab	Soil	2	2.5	Below concrete floor	02E0020-002.004	Nitrite by Ion Chromatography	MIS-A-026
CI39-0001			800-4		Soil				02E0083-002.004	Isotopic Am, Pu, U	ASP-A-004
CI39-0001			800-4		Soil				02E0083-009.004	Isotopic Am, Pu, U	ASP-A-004
CI39-0005			800-4		Soil				02E0096-011.002	Total Metals by ICP	MET-A-023
CI39-0005			800-4		Soil				002E0096-010.001	Gamma Spectroscopy on Solids	URS10B19
CI39-0005			800-4		Soil				02E0096-010.002	Total Metals by ICP	MET-A-023
SW Corner of			800-4		Water				02E0084-001.001	Volatile Organics in Aqueous Samples	VOA-A-009
SW Corner of			800-4		Water				02E0084-001.003	Volatile Organics in Aqueous Samples	VOA-A-009
SW Corner of			800-4		Water				02E0084-002.001	Volatile Organics in Aqueous Samples	VOA-A-009
SW Corner of			800-4		Water				02E0084-002.003	Volatile Organics in Aqueous Samples	VOA-A-009
828 Pit			800-4		Water Quality				02E0079-005.002	Gamma Spectroscopy on Solids	URS10B19
828 PIT			800-4		Water Quality				02E0079-005.006	Semivolatile Organics in Water	SVO-A-005
828 PIT			800-4		Water Quality				02E0079-005.003	Volatile Organics in Aqueous Samples	VOA-A-009
828 PIT			800-4		Water Quality				02E0079-006.001	Volatile Organics in Aqueous Samples	VOA-A-009
828 PIT			800-4		Water Quality				02E0079-007.001	Volatile Organics in Aqueous Samples	VOA-A-009

132

DATE	Location	Depth	Sample ID	SAMP COLLECT TYPE	Matrix	SED actual	SED actual	COMMENTS	BOTTLE NUM	Analysis Code	Lab
828 Pit			800-4		Water Quality				02E0079-005.010	Alpha Spec in Water	ASP-A-002
828 Pit			800-4		Water Quality				02E0079-005.011	Alpha Spec in Water	ASP-A-002
828 Pit			800-4		Water Quality				02E0079-005.012	Alpha Spec in Water	ASP-A-002
886			800-4		Water Quality				02E008-006.001	Gamma Spectroscopy on Solids	URS10B19
886			800-4		Water Quality				02E0080-006.002	Gamma Spectroscopy on Solids	URS10B19
886			800-4		Water Quality				02E0080-006.006	Semivolatile Organics in Water	SVO-A-005
886			800-4		Water Quality				02E0080-007.001	Volatile Organics in Aqueous Samples	VOA-A-009
886			800-4		Water Quality				02E0080-006.004	Volatile Organics in Aqueous Samples	VOA-A-009
886			800-4		Water Quality				02E0080-008.001	Volatile Organics in Aqueous Samples	VOA-A-009
886			800-4		Water Quality				02E0080-006.010	Alpha Spec in Water	ASP-A-002
886			800-4		Water Quality				02E0080-006.011	Alpha Spec in Water	ASP-A-002
886			800-4		Water Quality				02E0080-006.012	Alpha Spec in Water	ASP-A-002
886			800-4		Water Quality				02E0102-009.003	Volatile Organics in Aqueous Samples	VOA-A-009
886			800-4		Water Quality				02E0102-009.002	Gamma Spec in Water	URS10B18
886			800-4		Water Quality				02E0102-009.006	Semivolatile Organics in Water	SVO-A-005
886			800-4		Water Quality				02E0102-010.001	Volatile Organics in Aqueous Samples	VOA-A-009
886			800-4		Water Quality				02E0102-011.001	Volatile Organics in Aqueous Samples	VOA-A-009
886			800-4		Water Quality				02E0098-014.003	Volatile Organics in Aqueous Samples	VOA-A-009
886			800-4		Water Quality				02E0098-014.002	Gamma Spec in Water	URS10B18
886			800-4		Water Quality				02E0098-014.005	Total Metals by ICP in Water	MET-A-019
886			800-4		Water Quality				02E0098-014.006	Semivolatile Organics in Water	SVO-A-005
886			800-4		Water Quality				02E0098-015.001	Volatile Organics in Aqueous Samples	VOA-A-009
886			800-4		Water Quality				02E0098-016.001	Volatile Organics in Aqueous Samples	VOA-A-009
886			800-4		Water Quality				02E0096-016.005	Total Metals by ICP in Water	MET-A-019
886			800-4		Water Quality				02E0096-016.003	Volatile Organics in Aqueous Samples	VOA-A-009
886			800-4		Water Quality				02E0096-019.001	Alpha Spec in Water	ASP-A-002
886			800-4		Water Quality				02E0096-019.002	Alpha Spec in Water	ASP-A-002
886			800-4		Water Quality				02E0096-019.003	Alpha Spec in Water	ASP-A-002
886			800-4		Water Quality				02E0096-019.004	Alpha Spec in Water	ASP-A-002
886			800-4		Water Quality				02E0096-017.001	Volatile Organics in Aqueous Samples	VOA-A-009
886			800-4		Water Quality				02E0096-018.001	Volatile Organics in Aqueous Samples	VOA-A-009
886			800-4		Water Quality				02E0083-010.011	Alpha Spec in Water	ASP-A-002
886			800-4		Water Quality				02E0083-010.010	Alpha Spec in Water	ASP-A-002
886			800-4		Water Quality				02E0083-010.009	Alpha Spec in Water	ASP-A-002
886			800-4		Water Quality				02E0083-010.008	Alpha Spec in Water	ASP-A-002
886			800-4		Water Quality				02E0083-010.002	Gamma Spec in Water	URS10B18
886			800-4		Water Quality				02E0083-012.001	Volatile Organics in Aqueous Samples	VOA-A-009
886			800-4		Water Quality				02E0083-011.001	Volatile Organics in Aqueous Samples	VOA-A-009
886			800-4		Water Quality				02E0083-010.006	Semivolatile Organics in Water	SVO-A-005
886			800-4		Water Quality				02E0083-010.003	Volatile Organics in Aqueous Samples	VOA-A-009
889			800-4		Water Quality				02E0084-005.001	Volatile Organics in Aqueous Samples	VOA-A-009
889			800-4		Water Quality				02E0084-003.005	Gross Alpha/Beta	OS01A004
889			800-4		Water Quality				02E0084-003.005	Rad Screen - Aqueous	OS01A002
889			800-4		Water Quality				02E0084-003.001	Volatile Organics in Aqueous Samples	VOA-A-009

139

LOCATION	Region	County	Sample ID	SAMP COLLECT TYPE	Matrix	SED actual	SED actual	COMMENTS	BOTTLE NUM	Analysis Code	FILE
889			800-4		Water Quality				02E0084-003.003	Volatile Organics in Aqueous Samples	VOA-A-009
SOIL PILE			800-4		Water Quality				02E0082-005.002	Gamma Spec in Water	URS10B18
SOUTHWEST			800-4		Water Quality				02E0084-001.005	Gross Alpha/Beta	OS01A004
SOUTHWEST			800-4		Water Quality				02E0084-001.005	Rad Screen - Aqueous	OS01A002
SW CORNER			800-4		Water Quality				02E0084-002.005	Gross Alpha/Beta	OS01A004
SW CORNER			800-4		Water Quality				02E0084-002.005	Rad Screen - Aqueous	OS01A002

APPENDIX C
CORRESPONDENCE

Serreze, Susan

From: Spence, Tracey
Sent: Tuesday, January 29, 2002 5:07 PM
To: Castaneda, Norma; 'elizabeth.potorff@state.co.us'; Bryson, Eva
Cc: Butler, Lane; Broussard, Marcella; Lindsay, Thomas; Primrose, Annette; Serreze, Susan; Shafer, Douglas
Subject: B123 Project Status 01-29-02

Both concrete areas with fixed contamination (in former Room 125 and Room 109) covered with steel plate have been removed and sampled. The Room 125 concrete and steel plate has been containerized in two ST90 metal containers. Approximately 1/3 of the Room 109 concrete material has also been containerized. The remaining 2/3 of this material was covered with plastic sheeting and will be containerized tomorrow in ST90 containers.

Approximately 2,800 square feet of the concrete slab has been broken near the southeast section of the slab using an excavator with a hydraulic hammer attachment. This work will be continued tomorrow on the east wing.

Tracey Spence
Environmental Restoration, T124A
303-966-4322
Pager: 212-6575
Fax: 303-966-2402
E-mail: tracey.spence@rfets.gov

Serreze, Susan

From: Spence, Tracey
Sent: Thursday, January 31, 2002 4:31 PM
To: Butler, Lane; Bryson, Eva; Broussard, Marcella; Castaneda, Norma; Foss, Dyan; 'Kleeman.Gary@EPA.gov'; Lucero, Robert; Madore, Catherine; McCranie, Deanna; Norland, Lee; 'Elizabeth.Potorff@state.co.us'; Primrose, Annette; Serreze, Susan; Shafer, Douglas; 'Carl.Spreng@state.co.us'
Cc: Spence, Tracey
Subject: B123 Status 01-31-02

B123 Slab Removal activities completed the week ending January 31, 2002:

- Removed two concrete areas with known fixed contamination covered with steel plate (in former Room 125 and Room 109).
- Sampled concrete with known fixed contamination and packaged the concrete and steel plate in six metal waste containers. The containers are staged within a Radiological Material Area established adjacent to the site on 4th Street.
- Broke and removed 2/3 of concrete slab section of the east wing. Concrete demolition is performed using an excavator with a hydraulic hammer and bucket/thumb attachment.
- Loaded and transported seven tandem dump-truck loads of the concrete to the onsite 980 Pad recycle stockpile area.

Work planned next week:

- Continue demolition of concrete slab and load-out to the 980 Pad recycle stockpile.
- Remove and package lead-contaminated soil at former Room 105.
- Initiate demolition of foundation footers.

Please note that the B123 project work schedule at this time is four 10-hour days (Monday - Thursday).

Tracey Spence
Environmental Restoration, T124A
303-966-4322
Pager: 212-6575
Fax: 303-966-2402
E-mail: tracey.spence@rfets.gov

Serreze, Susan

From: Spence, Tracey
Sent: Tuesday, February 05, 2002 5:33 PM
To: Butler, Lane; Bryson, Eva; Broussard, Marcella; Castaneda, Norma; Foss, Dyan; 'Kleeman.Gary@EPA.gov'; Lucero, Robert; Madore, Catherine; McCranie, Deanna; Norland, Lee; 'Elizabeth.Potorff@state.co.us'; Primrose, Annette; Rosco, Douglas; Serreze, Susan; Shafer, Douglas; 'Carl.Spreng@state.co.us'
Cc: Spence, Tracey
Subject: B123 Slab Removal Status 02-05-02

The following B123 slab removal activities were performed on Monday and Tuesday, February 4 and 5:

- Removed concrete slab sections of the east and north wings of the B123 pad.
- Loaded and transported 23 loads of concrete to the onsite 980 Pad for recycle.
- Verified and disconnected abandoned electrical lines on the north and south sides of the pad.
- Collected pH samples from surface soils within PAC 100-611.

Work Planned the rest of this week:

- Continue demolition of concrete slab and load-out to the 980 Pad recycle stockpile.
- Remove and package lead-contaminated soil at former Room 105.
- Initiate demolition of foundation footers.

Tracey Spence
Environmental Restoration, T124A
303-966-4322
Pager: 212-6575
Fax: 303-966-2402
E-mail: tracey.spence@rfets.gov

Serreze, Susan

From: David Kruchek [David.Kruchek@state.co.us]
Sent: Friday, February 08, 2002 2:22 PM
To: Kleeman.Gary@EPA.gov; Deanna.McCranie@rf.doe.gov; Eva.Bryson@rf.doe.gov; Norma.Castaneda@rf.doe.gov; Robert.Lucero@rf.doe.gov; Annette.Primrose@rfets.gov; Catherine.Madore@rfets.gov; Douglas.Rosco@rfets.gov; Douglas.Shafer@rfets.gov; Dyan.Foss@rfets.gov; Lane.Butler@rfets.gov; Lee.Norland@rfets.gov; Marcella.Broussard@rfets.gov; Susan.Serreze@rfets.gov; Tracey.Spence@rfets.gov; Carl.Spreng@state.co.us; David.Kruchek@state.co.us; Elizabeth.Pottorff@state.co.us
Cc: JAMES Hindman
Subject: Re: B123 Remediation Status 02-08-02

Thanks Tracy for the update.

Didn't see anything regarding the possible 125 sump, so just wanted to make sure that was still on the radar screen, since it was not previously RCRA closed. Please let me know what was determined regarding this sump.

>>> "Spence, Tracey" <Tracey.Spence@rfets.gov> 02/08/02 12:16PM >>>
B123 activities completed the week ending February 8, 2002:

- * Removed concrete slab sections on the east, north and west wings of the B123 pad.
- * Loaded and transported 47 loads of concrete to the onsite 980 Pad stockpile for recycle.
- * Collected pH samples from surface soil in PAC 100-611.
- * Removed 8 concrete spreader footers (building support columns with 4-foot by 4-foot by 1.5-foot thick concrete bases buried approximately four feet below ground surface).

Forecast Work:

Week Ending February 15:

- * Deliver two 20' cargo containers for concrete and piping waste to B123 site.
- * Continue removal of concrete spreader footers, break and transport footers to 980 Pad.
- * Commence demolition of foundation (perimeter) footing, concrete removal and load-out to the 980 Pad.
- * Excavate and package lead-contaminated soil and collect soil samples.

Week Ending February 22:

- * Remove, package and sample the former Room 156, 157 and 158 concrete-filled sumps.
- * Remove, sample and package source well materials.
- * Commence removal of process waste lines.

Tracey Spence
Environmental Restoration, T124A
303-966-4322
Pager: 212-6575
Fax: 303-966-2402
E-mail: tracey.spence@rfets.gov

Serreze, Susan

From: Spence, Tracey
Sent: Friday, February 08, 2002 12:16 PM
To: Butler, Lane; Bryson, Eva; Broussard, Marcella; Castaneda, Norma; Foss, Dyan; 'Kleeman.Gary@EPA.gov'; 'David.Kruchek@state.co.us'; Lucero, Robert; Madore, Catherine; McCranie, Deanna; Norland, Lee; 'Elizabeth.Pottorff@state.co.us'; Primrose, Annette; Rosco, Douglas; Serreze, Susan; Shafer, Douglas; 'Carl.Spreng@state.co.us'
Cc: Spence, Tracey
Subject: B123 Remediation Status 02-08-02

B123 activities completed the week ending February 8, 2002:

- Removed concrete slab sections on the east, north and west wings of the B123 pad.
- Loaded and transported 47 loads of concrete to the onsite 980 Pad stockpile for recycle.
- Collected pH samples from surface soil in PAC 100-611.
- Removed 8 concrete spreader footers (building support columns with 4-foot by 4-foot by 1.5-foot thick concrete bases buried approximately four feet below ground surface).

Forecast Work:

Week Ending February 15:

- Deliver two 20' cargo containers for concrete and piping waste to B123 site.
- Continue removal of concrete spreader footers, break and transport footers to 980 Pad.
- Commence demolition of foundation (perimeter) footing, concrete removal and load-out to the 980 Pad.
- Excavate and package lead-contaminated soil and collect soil samples.

Week Ending February 22:

- Remove, package and sample the former Room 156, 157 and 158 concrete-filled sumps.
- Remove, sample and package source well materials.
- Commence removal of process waste lines.

Tracey Spence
Environmental Restoration, T124A
303-966-4322
Pager: 212-6575
Fax: 303-966-2402
E-mail: tracey.spence@rfets.gov

Serreze, Susan

From: Spence, Tracey
Sent: Thursday, February 14, 2002 5:11 PM
To: Norland, Lee; Shafer, Douglas; Serreze, Susan
Subject: FW: B123 Backfill

FYI.

-----Original Message-----

From: David Kruchek [SMTP:David.Kruchek@state.co.us]
Sent: Thursday, February 14, 2002 3:32 PM
To: Tracey.Spence@rfets.gov
Cc: Annette.Primrose@rfets.gov; Dyan.Foss@rfets.gov; Carl Spreng; Steve Tarlton; Elizabeth.Pottorff@state.co.us
Subject: Re: B123 Backfill

We concur with these points with the following clarification:

In point #2, discrete soil samples need to be collected at locations with evidence of pipe failure or leakage. Rather than "may be collected". This is assuming the process waste lines are generally in tact and any point of discharge would be an unusual occurrence and should be sampled.

>>> "Spence, Tracey" <Tracey.Spence@rfets.gov> 02/13/02 11:02AM >>>
David,

In follow-up to our meeting yesterday concerning the use of onsite soil as backfill material at the B123 site, the points of our discussion are summarized below for clarification. Please provide your concurrence on these points.

1. The soil recently excavated adjacent to portions of the concrete footer of the B123 foundation west wing will be returned to the excavation trench as clean backfill material based on building process knowledge, field screening results, and the existing B123 surface and subsurface soil sampling data (summarized in the Industrial Area Sampling and Analysis Plan Fiscal Year 2002 Addendum #IA-02-0) which indicate that this soil is clean. Field screening radiological surveys were performed on the concrete footer material. No fixed or removable radioactivity on the concrete was observed.

2. In accordance with the Field Implementation Plan Addendum for Removal of Building Slabs for B123 and the B121 Security Incinerator, during removal of the B123 underground process waste lines overburden soil to within approximately six inches of the top of piping will be excavated and stockpiled for use as backfill material unless there is evidence of contamination identified through visual inspection and field screening. Following removal of clean overburden, potentially contaminated soil will be excavated and sampled and dispositioned appropriately. Discrete soil samples may be collected at locations with evidence of pipe failure and leakage.

3. Once a section of B123 process line has been removed and all potentially contaminated soil is excavated, confirmation soil samples

will
be collected from the excavation per RADMS to determine the
post-action
condition of the subsurface soils. The confirmation samples will be
analyzed for radionuclides by alpha-spectroscopy at an off-site
laboratory.

The turnaround time for the offsite analysis is expected to be up to
five
days. To avoid potential safety and weather issues associated with
open
trenches at the B123 site, the confirmation samples may be analyzed by
gamma-spectroscopy prior to off-site shipment. The on-site
gamma-spectroscopy results may be used to make decisions to backfill
the
trenches prior to receiving the off-site confirmation sample results.
Once
received, the confirmation sample results will be used to verify that
the
target cleanup levels are achieved. If the confirmation sample
results
indicate that contamination is present above cleanup target levels,
further
excavation and sampling will continue.

Please contact me if you have any questions or require additional
information.

Tracey Spence
Environmental Restoration, T124A
303-966-4322
Pager: 212-6575
Fax: 303-966-2402
E-mail: tracey.spence@rfets.gov

Serreze, Susan

From: Spence, Tracey
Sent: Saturday, February 16, 2002 6:41 AM
To: Butler, Lane; Bryson, Eva; Broussard, Marcella; Castaneda, Norma; Foss, Dyan; 'Kleeman.Gary@EPA.gov'; 'David.Kruchek@state.co.us'; Lucero, Robert; Madore, Catherine; McCranie, Deanna; Norland, Lee; 'Elizabeth.Pottorff@state.co.us'; Primrose, Annette; Rosco, Douglas; Serreze, Susan; Shafer, Douglas; 'Carl.Spreng@state.co.us'
Cc: Spence, Tracey
Subject: B123 Remediation Status 02-15-02

B123 activities completed the week ending February 15, 2002:

- Excavated and removed approximately 320 linear feet of the foundation (perimeter) footing on the north, east and west sections of the west foundation wing. Backfilled portions of the footer trenches on north and west sections of the west wing.
- Demolished removed pieces of concrete footer and transported the footer materials (approximately 80 cubic yards) to the 980 Pad stockpile for recycle. To date, approximately 540 cubic yards of B123 foundation concrete has been stockpiled at the 980 Pad.

Forecast Work:

- Continue excavation and demolition of foundation footing, concrete removal and load-out to the 980 Pad.
- Excavate and package lead-contaminated soil and collect soil samples.
- Remove, package and sample the former Room 156, 157 and 158 concrete-filled sumps.
- Remove, sample and package source well materials.
- Commence removal of process waste lines.

Tracey Spence
Environmental Restoration, T124A
303-966-4322
Pager: 212-6575
Fax: 303-966-2402
E-mail: tracey.spence@rfets.gov

Serreze, Susan

From: Spence, Tracey
Sent: Friday, February 22, 2002 12:45 PM
To: Butler, Lane; Bryson, Eva; Broussard, Marcella; Castaneda, Norma; Foss, Dyan; 'Kleeman.Gary@EPA.gov'; 'David.Kruchek@state.co.us'; Lucero, Robert; Madore, Catherine; McCranie, Deanna; Norland, Lee; 'Elizabeth.Pottorff@state.co.us'; Primrose, Annette; Rosco, Douglas; Serreze, Susan; Shafer, Douglas; 'Carl.Spreng@state.co.us'
Cc: Spence, Tracey
Subject: B123 Remediation Status 02-22-02

B123 activities completed the week ending February 22, 2002:

- Developed the draft IWCP work package for removing approximately 22 feet of steam line with asbestos insulation material.
- Removed soil with lead-contamination on north side of site, packaged soil in two metal waste containers, collected confirmation samples from excavation for offsite analysis for lead (see attached photos).
- Excavated to expose the underground sumps and associated process lines in former Rooms 156, 157, and 158 (see attached photos). The sumps appear to be filled with soil and gravel. The Room 156 sump contained water likely resulting from infiltration of surface water. The water was sampled for Gross Alpha/Beta analysis. Results are expected by Monday (February 25). The sumps will be removed and packaged once requirements for waste characterization and inspection of the contents of the sumps have been identified by the Waste Requirements Group on Monday, February 25.
- Continued demolition of foundation footing. Loaded and transported 12 loads of concrete to the 980 Pad for recycle. Approximately 600 cubic yards of concrete have been delivered to the 980 Pad. Back-filled footer trenches on north and west wings.

Forecast Work:

- Continue demolition of foundation footing on east wing and load-out to the 980 Pad.
- Remove, package and sample the former Room 156, 157 and 158 concrete-filled sumps.
- Remove rad-contaminated footer.
- Remove, sample and package source well materials.
- Commence removal of process waste lines.



B123 Pb Remediation
Area 2-18...



B123 Pb Remediation
Area Depth...



B123 Sumps
02-21-02.jpg



B123 Rm 156
Sump.jpg



B123 Rm 157 158
Sumps.jpg

Tracey Spence
Environmental Restoration, T124A
303-966-4322
Pager: 212-6575
Fax: 303-966-2402
E-mail: tracey.spence@rfets.gov

Serreze, Susan

From: Spence, Tracey
Sent: Thursday, February 28, 2002 5:09 PM
To: Butler, Lane; Bryson, Eva; Broussard, Marcella; Castaneda, Norma; Foss, Dyan; 'Kleeman.Gary@EPA.gov'; 'David.Kruchek@state.co.us'; Lucero, Robert; Madore, Catherine; McCranie, Deanna; Norland, Lee; 'Elizabeth.Pottorff@state.co.us'; Primrose, Annette; Rosco, Douglas; Serreze, Susan; Shafer, Douglas; 'Carl.Spreng@state.co.us'
Cc: Spence, Tracey
Subject: B123 Remediation Status 03-01-02

B123 activities completed the week ending March 1, 2002:

- Removed the three concrete sumps and pipelines located in the former Rooms 156, 157 and 158. The sumps were filled with gravel and soil. Approximately 40 feet of 4-inch diameter stainless steel pipeline was removed. No contamination was detected on the sumps or pipelines. (see attached photos)
- Loaded the three concrete sumps and pipelines into two 20-foot cargo containers. The sumps and pipelines will be disposed offsite as low-level waste.
- Excavated greater than one foot of soil around and from beneath the sump locations and excavated greater than one foot of soil from the pipeline trench between the Room 156 sump location and the Room 157 sump location. The excavated soil was placed on and covered with plastic sheeting. This soil will be sampled next week for both onsite and offsite radionuclide analyses.
- Collected one confirmation sample from beneath each sump location and one confirmation sample in the pipeline trench between the Room 156 sump location and the Room 157 sump location. These samples will be shipped offsite for radionuclide analyses by alpha spectroscopy.
- Continued demolition of foundation footing on east wing and load-out to the 980 Pad.

Forecast Work:

- Continue demolition of remaining foundation footing and load-out to the 980 Pad.
- Remove section of the rad-contaminated footer encountered when removing the concrete area with fixed contamination in the former Room 125 location.
- Remove, sample and package source well materials.
- Commence removal of process waste lines.

No work was conducted at the 123 site on Monday and half the day Tuesday due to adverse weather conditions.



B123 Room 157&158
sumps.jpg



B123 Sump Piping
02-27-02.jpg

Tracey Spence
Environmental Restoration, T124A
303-966-4322
Pager: 212-6575
Fax: 303-966-2402
E-mail: tracey.spence@rfets.gov

Serreze, Susan

From: David Kruchek [David.Kruchek@state.co.us]
Sent: Tuesday, March 05, 2002 2:14 PM
To: Kleeman.Gary@EPA.gov; Deanna.McCranie@rf.doe.gov; Eva.Bryson@rf.doe.gov; Norma.Castaneda@rf.doe.gov; Robert.Lucero@rf.doe.gov; Annette.Primrose@rfets.gov; Catherine.Madore@rfets.gov; Douglas.Rosco@rfets.gov; Douglas.Shafer@rfets.gov; Dyan.Foss@rfets.gov; Lane.Butler@rfets.gov; Lee.Norland@rfets.gov; Marcella.Broussard@rfets.gov; Susan.Serreze@rfets.gov; Tracey.Spence@rfets.gov; Carl.Spreng@state.co.us; David.Kruchek@state.co.us; Elizabeth.Pottorff@state.co.us
Cc: stephen.nesta@rfets.gov; JAMES Hindman; Steve Tarlton
Subject: Re: B123 Remediation Status 03-01-02

Tracey,

Sorry for not getting or replying to this earlier, but did you find any evidence of the contaminated sump in room 125 when the contaminated area was removed? The RCRA closure CDD for the sump in Rm 125 indicated that the sump in this room was not cleaned closed, nor were the process waste lines.

>>> "Spence, Tracey" <Tracey.Spence@rfets.gov> 02/28/02 05:08PM >>>
B123 activities completed the week ending March 1, 2002:

- * Removed the three concrete sumps and pipelines located in the former Rooms 156, 157 and 158. The sumps were filled with gravel and soil. Approximately 40 feet of 4-inch diameter stainless steel pipeline was removed. No contamination was detected on the sumps or pipelines. (see attached photos)
- * Loaded the three concrete sumps and pipelines into two 20-foot cargo containers. The sumps and pipelines will be disposed offsite as low-level waste.
- * Excavated greater than one foot of soil around and from beneath the sump locations and excavated greater than one foot of soil from the pipeline trench between the Room 156 sump location and the Room 157 sump location. The excavated soil was placed on and covered with plastic sheeting. This soil will be sampled next week for both onsite and offsite radionuclide analyses.
- * Collected one confirmation sample from beneath each sump location and one confirmation sample in the pipeline trench between the Room 156 sump location and the Room 157 sump location. These samples will be shipped offsite for radionuclide analyses by alpha spectroscopy.
- * Continued demolition of foundation footing on east wing and load-out to the 980 Pad.

Forecast Work:

- * Continue demolition of remaining foundation footing and load-out to the 980 Pad.
- * Remove section of the rad-contaminated footer encountered when removing the concrete area with fixed contamination in the former Room 125 location.
- * Remove, sample and package source well materials.
- * Commence removal of process waste lines.

No work was conducted at the 123 site on Monday and half the day
Tuesday due
to adverse weather conditions.

<<B123 Room 157&158 sumps.jpg>> <<B123 Sump Piping 02-27-02.jpg>>

Tracey Spence
Environmental Restoration, T124A
303-966-4322
Pager: 212-6575
Fax: 303-966-2402
E-mail: tracey.spence@rfets.gov

Serreze, Susan

From: Spence, Tracey
Sent: Friday, March 08, 2002 3:19 PM
To: Butler, Lane; Bryson, Eva; Broussard, Marcella; Castaneda, Norma; Foss, Dyan; 'Kleeman, Gary@EPA.gov'; 'David.Kruchek@state.co.us'; Lucero, Robert; Madore, Catherine; McCranie, Deanna; Norland, Lee; 'Elizabeth.Pottorff@state.co.us'; Primrose, Annette; Rosco, Douglas; Serreze, Susan; Shafer, Douglas; 'Carl.Spreng@state.co.us'
Cc: Spence, Tracey
Subject: B123 Remediation Status 03-08-02

B123 remediation activities completed the week ending March 8, 2002:

- Removed the east-west section of the P-2 process waste line (approximately 120 feet) from the B123 north wing. Liquid was encountered beneath a 4-foot section of pipe located beneath the former Room 112. The excavation was stopped in this area and samples of the liquid and soil beneath the liquid were collected. No contamination was detected on the removed pipe. Approximately 1 gallon of liquid was standing in the sand bedding beneath the pipe (see attached photographs). No other liquid was encountered during removal of the east-west section of P-2 pipe.
- Removed the north-south section (approximately 30 feet) of P-2 process waste pipe from beneath the former Room 132 area. No evidence of leakage from the pipe was observed.
- Two 10-foot sections of steam piping with asbestos-containing insulation were removed and packaged by an asbestos abatement contractor. The materials were transferred to B776.
- Continued removal of the east footing on the east wing and partially back-filled the footer trench. Concrete footer material was transported to the recycle 980 Pad.
- Collected samples from the soil stockpiles generated from removing soils beneath the P-2 piping and the three sump locations. These samples will be analyzed for radionuclides onsite using gamma spectroscopy and offsite by alpha spectroscopy. The excavated soil was placed on and covered with plastic sheeting.

Forecast Work:

- Continue demolition of remaining foundation footing and load-out to the 980 Pad.
- Continue removal of process waste lines.
- Receive results for pipe liquid samples and remediate soils if necessary.
- Remove section of the rad-contaminated footer encountered when removing the concrete area with fixed contamination in the former Room 125 location.
- Remove, sample and package source well materials.

Due to the high wind conditions, B123 field work was shut down a total of 11 hours this week.



Liquid from Room 112
Process L...



Liquid from Room 112
Process L...



P-2 Waste Line from
B123 North...



Room 112 Process
Line Looking ...



Room 112 Process
Line Looking ...

Tracey Spence
Environmental Restoration, T124A
303-966-4322
Pager: 212-6575
Fax: 303-966-2402
E-mail: tracey.spence@rfets.gov

Serreze, Susan

From: Spence, Tracey
Sent: Thursday, March 14, 2002 6:20 PM
To: Butler, Lane; Bryson, Eva; Broussard, Marcella; Castaneda, Norma; Foss, Dyan; 'Kleeman.Gary@EPA.gov'; 'David.Kruchek@state.co.us'; Lucero, Robert; Madore, Catherine; McCranie, Deanna; Norland, Lee; 'Elizabeth.Pottorff@state.co.us'; Primrose, Annette; Rosco, Douglas; Serreze, Susan; Shafer, Douglas; 'Carl.Spreng@state.co.us'
Cc: Spence, Tracey
Subject: B123 Remediation Status 03-15-02

B123 remediation activities completed the week ending March 15, 2002:

- Removed the 18-foot-long Cs-137 source well. The source well piping consists of 18-inch diameter corrugated steel pipe with a slightly smaller diameter stainless steel liner pipe. A stainless steel bottom is welded to the bottom of the corrugated pipe. The source well appears to be filled with concrete. No significant corrosion was observed on the corrugated pipe surface (see attached photographs).

The source well was backfilled with sand. Groundwater was observed approximately 5 feet below the top of the pipe. No contamination was observed on the pipe surface; however, additional surveys will be made when the pipe is dry.

Samples were collected from soil beneath the bottom of the source well pipe and from soil adhered to the bottom of the pipe for radionuclide analyses (gamma and alpha spectroscopy). Samples were also collected for the same analyses from the stockpile of sand removed from around the pipe. Due to the depth of the source well excavation (approximately 20 feet) and associated hazards and weather issues, the excavation was backfilled to the base of the footer wall surrounding the hole (see attached photograph).

- Removed the west footer of the east wing (approximately 200 feet) and backfilled the footer trench.
- Excavated and removed approximately 90 feet of the north-south section of the P-2 process waste line beneath the (former) B123 east wing. Collected confirmation samples for this section of pipe.
- Containerized sections of the P-2 process waste line pipe removed last week from the north wing and from the former Room 132 area.
- Received gamma spectroscopy results for the soil samples collected last week beneath the P-2 process waste line. The results do not indicate activities above the MDA for analytes of concern.

Forecast Work:

- Continue demolition of remaining foundation footing and load-out to the 980 Pad.
- Continue removal of process waste lines.
- Remove section of the rad-contaminated footer encountered when removing the concrete area with fixed contamination in the former Room 125 location.



B123 Source Well
03-13-02.jpg



B123 Source Well Top
03-13-02....



B123 Source Well
Excavation Ba...

Tracey Spence
Environmental Restoration, T124A
303-966-4322
Pager: 212-6575
Fax: 303-966-2402
E-mail: tracey.spence@rfets.gov

Serreze, Susan

From: Spence, Tracey
Sent: Friday, March 22, 2002 12:23 PM
To: Butler, Lane; Bryson, Eva; Broussard, Marcella; Castaneda, Norma; Foss, Dyan; 'Kleeman.Gary@EPA.gov'; 'David.Kruchek@state.co.us'; Lucero, Robert; Madore, Catherine; McCranie, Deanna; Norland, Lee; 'Elizabeth.Pottorff@state.co.us'; Primrose, Annette; Rosco, Douglas; Serreze, Susan; Shafer, Douglas; 'Carl.Spreng@state.co.us'
Cc: Spence, Tracey
Subject: B123 Remediation Status 03-22-02

B123 remediation activities completed the week ending March 22, 2002:

- Removed 6' x 5' section of rad-contaminated (fixed) concrete footer at the former Room 125 area. Packaged the footer concrete into low-level waste cargo container.
- Completed removal of the remaining concrete footer and transported to the recycle stockpile. All B123 footer materials have been removed.
- Backfilled and compacted the P-2 process waste line trench (approx. 120 feet) excavated last week at the north wing area.
- Excavated and removed 40 feet of process waste pipe between the former Room 158 sump location and Manhole-1. Excavated soil to approximately one foot beneath the 40-foot section of pipe and stockpiled the soil on plastic. Collected one confirmation sample at the bottom of the pipe trench midway between the former sump and Manhole-1 locations. Collected characterization samples from the stockpile for radionuclide analyses.
- Packaged removed process waste pipe into low-level waste cargo container.
- Excavated and exposed one 5-foot deep concrete process waste line manhole (MH-1), located at the southwest corner of the site. Collected sample of liquid inside the manhole for gross alpha/beta analysis.
- Removed 1-1/2 feet (average) of soil overburden and underlying 4-inch asphalt between the former building east and west wing areas (approx. 5,400 square feet of asphalt).
- Excavated three pot-holes to identify and document depth of the Horizontal Drilling casing located beneath the former north wing area (photographed). This casing was measured greater than 3 feet below ground surface and will be left in place.
- Received gamma spectroscopy results for the soil samples collected last week beneath the sections of P-2 process waste line removed beneath the former east wing area. The results do not indicate activities above the MDA for analytes of concern.

Forecast work:

- Continue removal of remaining process waste lines located on the south side of the site. This includes removal of a second process waste manhole (MH-2).
- Backfill and compact P-2 waste line trenches at the former east wing areas.
- Receive MH-1 liquid data and manage liquid accordingly.
- Remove and package MH-1 in low-level waste cargo container.
- Continue removal and load-out of asphalt pavement on south side of site.
- Transfer the removed concrete pad from the B121 site to the B123 site. Break concrete pad at B123 site and load-out to the 980 recycle stockpile.

Note: Project completion expected by April 5, 2002.

Tracey Spence
Environmental Restoration, T124A
303-966-4322
Pager: 212-6575
Fax: 303-966-2402
E-mail: tracey.spence@rfets.gov

Serreze, Susan

From: Spence, Tracey
Sent: Friday, March 29, 2002 12:11 PM
To: Butler, Lane; Bryson, Eva; Broussard, Marcella; Castaneda, Norma; Foss, Dyan; 'Kleeman.Gary@EPA.gov'; 'David.Kruczek@state.co.us'; Lucero, Robert; Madore, Catherine; McCranie, Deanna; Norland, Lee; 'Elizabeth.Pottorff@state.co.us'; Primrose, Annette; Rosco, Douglas; Serreze, Susan; Shafer, Douglas; 'Carl.Spreng@state.co.us'
Cc: Spence, Tracey
Subject: B123 Remediation Status 03-29-02

B123 remediation activities completed the week ending March 22, 2002:

- Transported (8'x 12') concrete pad from B121 to the B123 site with high capacity forklift. Size-reduced the pad with hydraulic hammer and loaded-out to the onsite concrete recycle stockpile. Backfilled the B121 pad area to grade with road-base material.
- Received gross alpha/beta analysis results for liquid sample collected in B123 manhole MH-1. The analytical results indicate no contamination in the liquid.
- Excavated and removed the concrete manhole MH-1 and a 5'x5' concrete pad beneath the manhole. Collected confirmation soil samples from beneath the MH-1 location (for gamma-spec and alpha-spec analysis) and backfilled/compacted the excavation -- to allow work to continue in this area prior to receiving gamma-spec results. The manhole and concrete pad will be placed in to a low-level waste cargo container next week.
 - **Note:** an east-west trending 4" diameter HDPE pipe was exposed immediately north of MH-1. Approximately 3 gallons of liquid from the pipe were absorbed into the underlying soil. Soil samples were collected for gamma-spec and alpha-spec analysis. Gamma-spec results for the soil indicate no contamination in the soil. This pipe will be tracked both directions and removed next week when space is made available to excavate further.
- Received gamma-spec analysis results for the B123 east wing P-2 process waste line trench confirmation samples and soil stockpile characterization samples. Backfilled and compacted the B123 P-2 east wing area process waste line trenches.
- Backfilled the former courtyard area between the B123 east and west wing areas with onsite soils.
- Excavated the B123 SVOC soil contamination area (approx. 5'x5'x3' deep) and packaged soil into one metal waste container. Collected confirmation soil samples at the excavation bottom and collected soil samples for waste characterization. This remediation was conducted based on B123 pre-characterization subsurface soil data showing SVOC concentrations in soil above Tier II action levels.
- Excavated overburden soil above approximately 35' of the B123 P-1 process waste pipe extending east from manhole MH-1. Excavation at this location was stopped when it was observed that, if continued, the trench would be in close proximity to a known underground communications line in this area. Continued excavation will be evaluated next week with the K-H Excavation Specialist.
- Removed approx. 20' of B123 concrete sidewalk and steps and hauled concrete to the onsite recycle stockpile. All recyclable concrete has been removed from the B123 site.
- Rough-graded the northern 2/3 of the B123 site.
- Filled four 20' rolloff containers with asphalt removed from the former courtyard area.
- Decontaminated and released excavator (with hydraulic hammer attachment) from the B123 site and transported the excavator to the B889 site. Also released the tandem dump truck.

Forecast work:

- Continue removal of remaining process waste lines located on the south side of the site (as directed by Diggers). This includes the removal of a second process waste line manhole (MH-2) located approximately 65' east of MH-1.
- Collect trench and manhole MH-2 confirmation soil samples and associated soil stockpile characterization samples.
- Backfill and compact trench and manhole excavations.
- Track and remove the 4" diameter HDPE pipe.
- Package removed process waste pipe and manhole materials into low-level waste cargo container.
- Continue removal and load-out of asphalt pavement on south side of site.
- Release and transport excavator (with bucket/thumb) to B889 site.

Note: All B123 remediation and backfill and grading work is expected to be completed by April 5, 2002. Also, next week I plan to create a B123 project photograph file on the RFETS intranet. I'll notify you when it's available for review.

Tracey Spence
Environmental Restoration, T124A
303-966-4322

Pager: 212-6575
Fax: 303-966-2402
E-mail: tracey.spence@rfets.gov

Serreze, Susan

From: Spence, Tracey
Sent: Friday, April 05, 2002 12:56 PM
To: Butler, Lane; Bryson, Eva; Broussard, Marcella; Castaneda, Norma; Foss, Dyan; 'Kleeman.Gary@EPA.gov'; 'David.Kruchek@state.co.us'; Lucero, Robert; Madore, Catherine; McCranie, Deanna; Norland, Lee; 'Elizabeth.Pottorff@state.co.us'; Primrose, Annette; Rosco, Douglas; Serreze, Susan; Shafer, Douglas; 'Carl.Spreng@state.co.us'
Cc: Spence, Tracey
Subject: B123 Remediation Status 04-05-02

B123 remediation activities completed the week ending April 5, 2002:

- Removed process waste manhole MH-2 on south side of the B123 site. Removed approximately 65 feet of process waste pipe line between B123 manholes MH-1 and MH-2. This completes removal of all B123 underground process waste lines and associated structures.
- Packaged MH-2 and process waste pipe into low-level waste cargo container. (See attached photograph)
- Collected confirmation soil samples from the pipeline trench and MH-2 excavations and characterization samples from the associated soil stockpiles. This completes sampling requirements for the B123 remediation project.
- Received gamma-spec analysis results for MH-1, MH-2 and associated process waste pipe trench confirmation soil samples. The gamma-spec analytical results for all samples indicate all isotopes of interest were well below applicable Tier II action levels for soils.
- Backfilled and compacted the MH-2 and process waste line trench.
- Tracked and removed approximately 85 feet of one 3" diameter HDPE electrical conduit pipe extending from MH-2 to 20 feet west of MH-1. The pipe was cut at this point due to nearness to the previously isolated 6" Domestic Fire Water pipe. This pipe was referred to as a 4" HDPE pipe in the 03-29-02 status report. The pipe has since been identified based on site utility maps.
- Completed removal and load-out of asphalt pavement for disposal as sanitary waste.
- Rough-graded B123 site in preparation for topsoil delivery next week.

Forecast work:

- Package concrete manhole MH-1 and 3" HDPE pipe in waste containers.
- Re-package two concrete sumps into one low-level waste cargo container, due to moisture observed inside the cargo.
- Relocate two cargo containers and five ST90 metal waste containers to B883 for foaming. The foam is used to brace the concrete materials inside the containers for transport. Once foamed, the cargo and ST90 containers will be staged at the B123 waste staging area (on 4th Street).
- Deliver and spread approved topsoil (from off-site vendor) at the B123 site.
- Apply approved seed mix for temporary vegetation.
- Prepare B123 Project Closeout Report.



B123 Manhole
MH-2.jpg

Note: I was unable to compile the B123 electronic photos on the RFETS Intranet this week. I will notify you once the photos are ready.

Tracey Spence
Environmental Restoration, T124A
303-966-4322
Pager: 212-6575
Fax: 303-966-2402
E-mail: tracey.spence@rfets.gov

Serreze, Susan

From: Spence, Tracey
Sent: Thursday, April 11, 2002 6:31 PM
To: Butler, Lane; Bryson, Eva; Broussard, Marcella; Castaneda, Norma; Foss, Dyan; 'Kleeman.Gary@EPA.gov'; 'David.Kruchek@state.co.us'; Lucero, Robert; Madore, Catherine; McCranie, Deanna; Norland, Lee; 'Elizabeth.Pottorff@state.co.us'; Primrose, Annette; Rosco, Douglas; Serreze, Susan; Shafer, Douglas; 'Carl.Spreng@state.co.us'
Cc: Spence, Tracey
Subject: B123 Remediation Status 04-12-02

B123 remediation activities completed the week ending April 12, 2002:

- Packaged concrete manhole MH-1 and all remaining process waste pipe into one low-level waste cargo container.
- Re-packaged one concrete sump into a fabric LiftLiner.
- Transported all B123 waste containers from the 4th Street waste staging area to the B123 site.
- Delivered 32 end-dump loads of topsoil to B123 site and spread the topsoil with front-end loader.

Forecast work:

- Fill two cargo containers and five ST90 metal waste boxes with foam to brace concrete materials (weighing over 200 pounds) inside the containers for shipment to an offsite disposal facility.
- Final grade the site and apply approved seed mix for temporary vegetation.
- Prepare B123 Project Closeout Report.

Tracey Spence
Environmental Restoration, T124A
303-966-4322
Pager: 212-6575
Fax: 303-966-2402
E-mail: tracey.spence@rfets.gov

Serreze, Susan

From: Spence, Tracey
Sent: Friday, April 19, 2002 2:05 PM
To: Butler, Lane; Bryson, Eva; Broussard, Marcella; Castaneda, Norma; Foss, Dyan; 'Kleeman.Gary@EPA.gov'; 'David.Kruchek@state.co.us'; Lucero, Robert; Madore, Catherine; McCranie, Deanna; Norland, Lee; 'Elizabeth.Pottorff@state.co.us'; Primrose, Annette; Rosco, Douglas; Serreze, Susan; Shafer, Douglas; 'Carl.Spreng@state.co.us'
Cc: Spence, Tracey
Subject: B123 Remediation Status 04-19-02

B123 remediation activities completed the week ending April 19, 2002:

- Size-reduced and repackaged one concrete sump into two Lift-Liner waste containers.
- Collected samples from OPWL pipe previously packaged in cargo container for RCRA characterization.
- Filled two cargo containers and five ST90 metal waste boxes with foam to brace concrete materials inside the containers for shipment to an offsite disposal facility.
- Demobilized all heavy equipment from B123 site.
- Scarified topsoil, seeded and applied hydromulch to B123 site. This completes the B123 site remediation activities.

Forecast work:

- Receive approvals for waste shipment.
- Prepare B123 Project Closeout Report.

Tracey Spence
Environmental Restoration, T124A
303-966-4322
Pager: 212-6575
Fax: 303-966-2402
E-mail: tracey.spence@rfets.gov

Appendix D
100-4 Proposed RFCA Action Levels

Appendix D
100-4 Proposed RFCA Action Levels

Location Code	Analyte	Result (pCi/g)	Background Plus Two Standard Deviations (pCi/g)	WRW AL (pCi/g)	ECO AL (pCi/g)
BU38-0002	Uranium-238	1.66	1.49	351	--
BU38-0002	Uranium-238	1.66	1.49	351	--
BU38-0004	Uranium-235	0.20	0.12	8	--
	Uranium-238	1.68	1.49	351	--
BU38-0005	Americium-241	0.05	0.02	76	--
BU39-0001	Uranium-238	3.03	1.49	351	--
BU39-0004	Americium-241	0.08	0.02	76	--
BU39-0011	Uranium-238	3.09	1.49	351	--
BV39-0003	Uranium-235	0.30	0.12	8	--
	Uranium-235	0.23	0.12	8	--
	Uranium-238	3.70	1.49	351	--
	Uranium-238	5.06	1.49	351	--
Central Point on Southern PWL	Uranium-238	1.55	1.49	351	--
Eastern Process Line	Americium-241	0.13	0.02	76	--
	Plutonium-239/240	0.06	0.02	50	--
	Uranium-238	2.47	1.49	351	--
Northern Process Line	Plutonium-239/240	0.11	0.02	50	--
	Uranium-235	0.15	0.12	8	--

Responses to CDPHE Comments, August 9, 2002 - Closeout Report for IHSS Groups 100-4 and 100-5

	CDPHE Comments, August 9, 2002	Responses
1	In the introduction, and Title, it should be identified that groups 100-4 & 100-5 are specifically related to Building 123 (slab removal) and the 121 incinerator pad. This helps identify the locations of these groups and the purpose of this activity, rather than the rather nebulous groups indicated. This will also help in cross referencing and finding information related to specific areas and buildings in the future.	The UBC site, IHSS, and PAC numbers were added to the Title page. The Introduction pertains to IHSS Groups 100-4 and 100-5. IHSS Group 100-4 is specifically introduced in Section 2.0 and IHSS Group 100-5 in Section 3.0. Describing IHSS Group 100-4 as Building 123 is misleading because this IHSS Group includes one UBC site, one IHSS, and two PACs.
	Not providing the useful information tying these nebulous ER groups to B123 and the 121 Pad creates confusion and misunderstanding. Although this does include more than just the UBC, this is all associated with B123 and 121 Pads. As such it is requested the title include reference to B123 and 121.	As stated above the title was changed to correctly refer to UBC 123, IHSS 148, PAC 100-611, and 100-5 (PAC 100-609). These are the correct RFCA designations for these sites. The designations "B123" and "121", while generally used by some regulatory agency and Site staff, are inaccurate. Decision documents must be technically correct. Phrases, acronyms, and abbreviations used by agency or Site staff are not the RFCA, CERCLA, RCRA, or CHWA designations for these sites. Both the IASAP addendum and ER RSOP notification used these designations. Changing designations now would be more confusing for those trying to follow the progress of the projects. Additionally, the removal of the Building 123 slab and the Building 121 incinerator pad were only part of the projects.
2	The sampling locations with exceedences of Tier 2 should be highlighted on figures 3 and 4 for quick identification.	These maps are already extremely busy and additional colors and associated legend elements will result in a less readable map. The AOC, which indicates Tier II exceedances, is shown on Figure 6. Figures 3 and 4 were initially presented in IASAP Addendum #IA-02-01. CDPHE approval of the addendum constitutes approval of the map content.

	<p>Highlighting by bolding should not create any issues with the readability of the map, and would add important information, currently missing. Simply because they were previously presented in another context does not provide any specific support for their current state.</p>	<p>It is very difficult to highlight text in text boxes on Figures 3 and 4 because the data was generated as graphics. Additionally, it is, in general, difficult to format text in ArcView because it is a mapping program not a graphics program.</p> <p>In future maps, separate location symbols will be used to differentiate between RFCA Tier I, RFCA Tier II, and other sampling location results as follows:</p> <ul style="list-style-type: none"> • Red colored symbols will be used for sampling locations with results greater than RFCA Tier I ALs; • Blue colored symbols will be used for sampling locations with results greater than Tier II ALs; • Yellow colored symbols will be used for sampling locations with results greater than background mean plus two standard deviations or detection limits; and • Gray colored symbols will be used for sampling locations with results less than background mean plus two standard deviations or detection limits.
3	<p>Figure 6 needs to identify on the map the specific locations and levels utilized to generate this map. If only two locations were actually elevated above levels of concern why does Figure 6 identify such a large area above Tier 2?</p>	<p>This map was generated using the data on Figures 3 and 4 and illustrates a contour around Tier II exceedances. This map was initially presented in ER RSOP Notification #02-01.</p>

	<p>Figure 6 should provide the information to support the map as drawn or another map should be made that properly presents this information.</p>	<p>The information to support this map is on Figures 3 and 4. The development of this map was discussed with Carl Spreng of CDPHE. The options for this map were (1) present circles around each Tier II AL exceedance or (2) present a "contour" line around the exceedances. Both CDPHE and DOE agreed that a "contour" map was appropriate. CDPHE approval of ER RSOP Notification #02-01 constitutes approval of the map content.</p> <p>The text in Section 2.2.1 was changed to the following: "The AOC is defined as the area, not individual points, with a concentration of contaminants greater than background mean plus two standard deviations or MDLs."</p>
4	<p>Section 2.1.1 - In reviewing the RCRA Closure Report for B123, not all of the process waste lines were "clean-closed", which should be mentioned (the process waste lines on the eastern side of B123 were not clean-closed). In addition the RCRA closure report did not specifically mention the removal of the sump in room 125. So although the sump must have been removed during removal of the building, it can only be assumed that the removal of the sump in room 125 occurred during this previous activity, since it was not found during this ER activity. This discussion should be properly modified, and this and section 2.3 should agree.</p>	<p>Not all of the process waste lines are RCRA units and, as such, were not included in "clean closure" of RCRA Unit 40. Pipeline P-2, located under the northern and eastern portions of the building, is not a RCRA unit and was not included in the closure of Building 123 components of RCRA Unit 40. The RCRA components included the following:</p> <ul style="list-style-type: none"> • Aboveground pipeline; • Pipe chases and sumps in Rooms 156, 157, and 158 • Room 125 sump; and • Underground piping beginning in Room 158 and draining to Valve Vault 18 (RMRS 1998). <p>These RCRA Unit components were described in ER RSOP Notification #02-01, which was approved by CDPHE in January 2002.</p> <p>The fate of the sump in Room 125 is discussed in Section 2.4, fourth paragraph.</p>

5	<p>Section 2.2, page 15- The project goals as presented are incomplete. The notification includes additional Accelerated Action Remediation Goals:</p> <ul style="list-style-type: none"> • Provide a remedy consistent with the RFETS goal of protection of human health and the environment; • Provide a remedy that minimizes the need for long-term maintenance and institutional or engineering controls; and • Minimize the spread of contaminants during implementation of accelerated actions. <p>Section 2.2.1 states that accelerated action goals were achieved; however, no explanation is provided for these achievements.</p>	<p>These goals are the overall long-term ER RSOP remedial action objectives, not project-specific goals. They are included in the ER RSOP notifications at the request of CDPHE. A new section (Section 2.8) that describes the contribution of the UBC 123 removal project to the overall long-term RAOs has been added.</p> <p>The accelerated action goals, which are project-specific goals, were achieved. The following text has been added:</p> <p>“ER RSOP Notification #02-01 accelerated action project objectives were achieved through the following:</p> <ul style="list-style-type: none"> • Removal of the concrete slab and associated structures; • Removal of belowgrade sumps and process waste lines; and • Removal of soil with contaminant concentrations greater than RFCA Tier I ALs.”
	<p>The new text for RAO 2 states removal of contaminant concentrations greater than RFCA Tier I AL minimized the need for institutional controls. Removal above Tier I does not change the need for institutional controls between the Residential 10-6 and WLRW 10-5 levels.</p>	<p>Institutional controls are discussed in Section 4.0 of the Closeout Report.</p>
6	<p>Section 2.2.1 – This section should describe how the radioactively contaminated areas left covered with steel plates and the lead area were cut out of the slab and removed at the beginning of the removal activities. Text on page 19 identifies that an unanticipated pipe was discovered during remediation and removed. For this pipeline and others, where is the information identifying the exact location and condition (depth, type of pipe, type of seal, etc.) for use in subsequent evaluations or final site documentation?</p>	<p>The following text was added to Section 2.2.2 under the heading <u><i>Building 123 Slab, Footers, Source Pits, and Manholes:</i></u></p> <p>“Concrete with fixed contamination covered with steel plates was cut out of the slab using a concrete saw. The cut concrete was then removed from the slab using the excavator with bucket/thumb attachment.” Pipelines have all been removed. The location of the pipelines is shown on Figure 7. The location of the pipelines was not surveyed and therefore the exact location and depth cannot be added. Additional information, including approximate depth and location and type of seal, was added to</p>

<p>b) It is stated that Figure 7 shows the extent of pipeline left in place and not found. However, this is not shown on Figure 7. As such, Figure 7 needs to be modified to show this information, or appropriate references provided. Also, why don't the locations of process waste lines shown here agree with those shown on other figures, such as Figure 9? Not found, left in place?</p> <p>c) Because there are numerous mention of rooms, a figure needs to be provided that identifies the locations of the former rooms in B123. This figure should, if at all possible, include the locations of process waste lines, sumps, drains, and any other physical concerns associated with the slab.</p> <p>d) Additional unusual occurrences should be added to this section. This should include the lead liner found around the drain inside the concrete</p>	<p>Table 4.</p> <p>This figure was changed.</p> <p>Rooms mentioned in the text in regards to the RCRA units are shown on Figures 14 and 15. References to rooms and additional features were added to Figures 2 and 9.</p> <p>The following text was added to Section 2.2.2, under the heading <u>Sumps and Process Waste Lines</u>: "A sheet of lead (approximately 2 feet x 3 feet x 1/8 inches thick) was encountered beneath an 8-inch- diameter drain located approximately 5 feet south of the lead-contaminated soil location. The lead sheet was observed approximately 3 inches beneath the drain."</p>
<p>Not having a surveyed location and depth is not a big issue if these pipes will be addressed with a later IHSS group, however if the pipes are not addressed later then the exact location and depth need to be known for the institutional control.</p> <p>A revised Figure 7 was not provided.</p> <p>This (Figure 2) does not provide sufficient information regarding room locations or boundaries. If D&D can provide such figures, then ER should as well.</p>	<p>This is understood.</p> <p>A pdf of Figure 7 was provided for review and incorporated into the final document.</p> <p>All rooms discussed in the Closeout Report are identified on the map. The room numbers (except those referenced) in Building 123 were not part of the accelerated action. Additionally, the Building was removed by D&D several years before the accelerated action.</p>

261

<p>7</p> <p>Page 19, second bullet – The manhole locations referred to are not labeled on Figure 9. On Table 4 the Pipelines are not labeled until Figure 14, Figure 7 would be an appropriate figure to label with these numbers. In general, try to label these “landmarks” sooner in the document and then in figures that have too much other information they can be more of the background.</p>	<p>8</p> <p>Section 2.2.3 – What is the reason for comparing data to method detection limit or background plus two standard deviations? In order to determine whether residual contamination is of concern, the comparison should be to PRG's or 10^6 residential risk. These values, even if not completed at the beginning of the project, should be provided here. If the numbers do not exist, then additional sampling and stewardship needs will need to be deferred until they are defined. These needs should be explicitly stated.</p> <p>b) Figure 11 provides data for a confirmation sample that appears to be collected on the SW side of the west side of B123, yet this sample location is not shown on figure 9 or 10. Please identify this sample or correct the figures as necessary.</p> <p>c) Figure 12 provides results for locations that did not analyze for radionuclides, please correct as appropriate. And/or correct Table 7.</p>
<p>Room, manhole, and pipeline numbers were added to Figures 2 and 9.</p>	<p>Data is compared to MDLs or background means plus two standard deviations in accordance with the IASAP. This comparison delineates the AOC. The stewardship evaluation is based on current RFCA ALs, MDLs, and background means plus two standard deviations in accordance with the IASAP and ER RSOP. Additional stewardship needs, if any, will be determined as part of the FS and Proposed Plan.</p> <p>This sample point on Figure 11 was relocated correctly.</p> <p>Table 7 was corrected.</p>
<p>Use of the background mean plus 2 standard deviations for action level comparisons was approved by CDPHE in June 2001 in the IASAP. Actions taken in accordance with the ER RSOP are accelerated actions based on ALs not risk assessment criteria.</p>	

	assessment and the agreed upon comparison to background should be standardized in all site cleanup documents. Section 6.2.5 (page 127) of the IASAP discusses use of a risk screening module in RADMS to be used on an IA Group basis. We do not see that the residual contamination data has been screened according to the Draft CRA methodology.	The risk screening module has not been developed yet. CDPHE and EPA have yet to comment on the Draft CRA Methodology.
9	Page 25, Table 6 – the headers on the Tier I & II columns are switched. This table and Figure 16 should also compare to 10-6 residential risk values even if background values are greater.	This table was corrected. Results in this table are compared to RFCA Tier I and Tier II ALs in accordance with the IASAP.
	Table 6 and Table 8 perform similar comparisons. A modified Table 8 is attached to these comments, the resource spreadsheet for the PRGs is apparently still in draft and PRGs are not calculated for all contaminants. Results exceeding the 10-6 Residential PRG are highlighted. Our analysis of these exceedances is that there are only a couple of samples that actually exceed the PRG and background, therefore no controls are needed to prevent digging on the basis of residual soil contamination. This also is an indication that the CRA is likely to indicate no risk from contamination.	Results in this table are compared to RFCA Tier I and Tier II ALs in accordance with RFCA. Results are not compared to PRGs because (1) remediation is in accordance with ALs not PRGs and (2) new ALs discussions will not be finalized until RFCA is changed. A discussion of risk is outside the scope of the Closeout Report. Additionally, as agreed to in the November 18, 2002 meeting, results from projects with addenda and/or notifications approved with current RFCA ALs will be compared to current RFCA ALs.

10	<p>Section 2.3 The third paragraph gives three instances where radionuclides (Am-241, U-235, and U-238) were detected above background plus two standard deviations. This section needs to explain why these detections of radionuclides did not trigger additional analyses of RCRA hazardous waste constituents and why it is concluded that the sumps and pipelines did not leak.</p> <p>b) The removal of the other pipelines, not associated with the three sumps should also be mentioned (the pipelines in the north and east side of B123). All of the process waste lines (New and Old) were included in the previous RCRA Closure activities, and are all RCRA concerns.</p>	<p>Additional samples were not collected in these areas because results were less than RFCA Tier II ALs, and the areas were backfilled (after the radionuclide data were received) as agreed to through the consultative process.</p> <p>It was concluded, based on process knowledge, that the pipelines carried radionuclides and elevated radionuclide levels could indicate leaks from pipelines had occurred. As indicated by the data, there are several instances where radionuclide activities are greater than the background means plus two standard deviations. However, the results for americium-241, plutonium-239/240, and uranium-235 indicate maximum values ranging from 0.01 to 0.18 pCi/g greater than the background values. Uranium-238 activities range from 0.17 to 3.57 pCi/g. All results are well below RFCA Tier II values. Given the age of the pipeline and the type of material transported, it is difficult to envision an underground pipeline leak that would result in these very small amounts of radionuclides.</p> <p>All pipelines removed are discussed in Section 2.2 and 2.4, not in Section 2.3. Pipeline P-2 located under the northern and eastern portions of the building, is not a RCRA unit and was not included in the closure of Building 123 Components of RCRA Unit 40. The RCRA components included the following:</p> <ul style="list-style-type: none"> • Aboveground pipeline; • Pipe chases and sumps in Rooms 156, 157, and 158; • Room 125 sump; and • Underground piping beginning in Room 158 and draining to Valve Vault 18 (RMRS 1998). <p>These RCRA Unit components were described in ER RSOP Notification #02-01, which was approved by CDPHE in January 2002.</p>
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11	<p>Section 2.4 - The discussion concerning the beryllium and methylene chloride should provide sufficient information to demonstrate why these analytes are not a concern. As such, if the detections of methylene chloride in the blanks indicate that this is a lab contaminant and not a site contaminant, this should be so stated, rather than implied for the reader to judge. Also, additional discussion concerning the beryllium detection should be provided to show why this is not a concern and was not remediated.</p>	<p>Beryllium was reported at sampling location SS306793 at concentrations of 0.16 mg/kg greater than the RFCA Tier II AL. This result was below the MDL of 5 mg/kg and, therefore, cannot be used reliably. This result was included because it was above background.</p> <p>Additional text was added to section 3.1.5 clarify the beryllium and methylene chloride discussions.</p>
	<p>Please include a reference to the new section where text is added when revisions to the document change its location.</p> <p>The lab MDL for Beryllium was supposed to be 0.2 mg/kg in Table E-4 of the IASAP. Lab problems causing higher detection limits or lab contamination should be discussed in the QA QC section.</p>	<p>This sample was collected in 1993. The MDL at the time of sample analysis is shown on Figure 3. Because this sample was collected in 1993 when the laboratory requirements were different, it does not have the same MDL as those listed in the IASAP which are for data collected in accordance with the IASAP.</p>
12	<p>Section 2.4.1 - contains an admirable start on capturing the stewardship information. Figure 16 and Table 8 provide an excellent presentation of known information. Additional information is needed to determine the exact final location of the sampling points, including survey information and whether the sampling location was covered with topsoil and is now buried at an unspecified depth beneath the topsoil applied to the site.</p>	<p>Survey, depth, and additional cover information were added to a new table, Table 4.</p>

	<p>Any pipes remaining within the IHSS group footprint should have been characterized.</p> <p>What is the remaining problem?</p> <p>What is required to address it?</p>	<p>The survey, depth, and additional cover information were added to a new table – Table 4 in accordance with the original comment request.</p> <p>Through the consultative process, CDPHE concurred with the decision to leave the remaining pipelines in place. A significant issue that resulted in leaving one pipeline in place at IHSS Group 100-4 was the overhead pipelines at the southern end of the site.</p> <p>Remaining problems, if any, and requirements for addressing remaining problems cannot be determined at this time.</p> <p>The following text was added to Section 2.2.2: “One to the south of UBC 123 and one to the east.”</p>
13	<p>It is unclear whether the recommended stewardship actions are really necessary. Does the residual contamination require management? Is it necessary to prohibit activities in this area because of residual contamination? If so, what area does this restriction apply to? Are the pipes left in place contaminated? What types of activity are restricted? In the long-term, is federal ownership required and why? What long-term monitoring is needed and why? The notification identified land use restrictions to prevent soil excavation. Are these necessary or not? If so, to what extent? Is it necessary to maintain a soil covering over the area, and if so, how much? Would additional soil removal eliminate these long-term requirements? If so, where is the justification, including costs, showing that leaving the material is appropriate?</p>	<p>The stewardship actions were directed at remaining pipelines, which are approximately 5 feet below the surface. It is not known yet whether the remaining pipes are contaminated. Soil disturbance is restricted because potential contamination at the pipes is unknown.</p> <p>The need for long-term monitoring will be addressed in the Long-Term Stewardship Plan. Costs for additional remediation or monitoring cannot be developed until after the Long-Term Stewardship Plan is in place.</p>

14	Section 2.4.1 - Table 8 - The Tier 1 and 2 headers are incorrect, please switch.	This table was corrected.
15	<p>Section 2.5 - VOC samples should be added to the analyte list for sample BV38-0001 when it is collected as it is closest to the well 10498 which has hits of PCE. As sampling upgradient of this well did not include VOC's the area may require further investigation if the hits in well 10498 continue.</p> <p>b) It is mentioned that two planned confirmation samples were not collected, but there is no mention of the other three samples that were not collected, nor is there any discussion of other samples that were collected or changes in proposed sample locations. Please provide an appropriate explanation of all deviations (see Figure 9).</p>	<p>VOCs were not sampled for at location BV38-0001 and cannot be added to the list. This confirmation sample was not collected because the pipeline was not excavated at this location. Potential groundwater contamination will be addressed through the IA plume remediation.</p> <p>A new table, Table 8, presents the planned versus actual sampling locations.</p>
16	<p>Section 2.6 - The purpose of this section is unclear. As written it describes the actions taken very briefly, but does not indicate the current condition of the area. This might be a good place to define the arrangement and location of sealed pipe ends, proximity to adjacent IHSS's that may require action, etc. It should identify the current site conditions, rather than a recap of the activities to date. This should include the location, depth, and condition of all remaining infrastructure, concrete, asphalt, pipes, drains, conduits, tanks, wells, etc. Depth of remedial activities/disturbed soil. Presence (location, depth, and levels) of any unremediated contamination or possible contamination, as well as proximity to adjacent IHSS's that may require action. Type, depth and extent of any fill material placed at this site, including topsoil</p>	<p>Residual contamination information has been added to this section (Now Section 3.1.5), and it has been moved to precede the Stewardship Evaluation section.</p>

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17	Section 2.7 – Stockpiled soils that are returned to the excavation become part of the residual contamination analysis if they have results exceeding 10^{-6} residential risk or background. Please provide a discussion regarding the management and disposal of the lead contaminated concrete (lead liner found inside the concrete) found in the slab on the north side of B123. There should be some mention of this and appropriate disposal as RCRA waste or LLMW. This should also be reflected in Table 9.	Stockpiled soil with analytical results greater than background means plus two standard deviations was returned to the excavation and added to the residual contamination analysis and map (was Figure 16 – now Figure 17). The lead liner found inside the concrete was disposed of as LLMW, along with process waste pipes. This information was added to Section 2.6, Waste Management.
18	Section 2.8 – Is vegetation monitoring being conducted for re-vegetated sites? It does not appear that any of the Canada bluegrass has sprouted.	Revegetation at the UBC-123 site is being monitored. However, as evidenced by past remedial actions, it can take 2 years or more for vegetation to fully establish. The persistent drought conditions have not been conducive to seed germination or plant growth, and all seeding and revegetation actions are on hold until drought conditions abate.
19	Figure 17 – Please provide details of pipes left in place, depth, exact location and condition, type of pipe, type of seal, etc.	The following information was added to Section 2.2: type of pipe, type of seal, and condition where known. Also see response to comment number 6.
	Section 2.5.5 - The discussion regarding remaining pipelines does not appear to agree with figures 18 and 17, or the initial condition/locations of pipelines as shown on other figures, such as Fig 2. There do not appear to be any pipelines extending east then north from Manhole 3. There should also be mention of manhole 4 and the pipeline extending north from manhole 4, as well as the pipelines extending west from manholes 3 & 4, as shown on Fig18. This discussion and that shown on the figures must agree.	Pipelines were eliminated from Figure 18 (now Figure 16) at the request of CDPHE because the Figure 18 (now Figure 16) was too busy.

20	Page 44 Table 10 – Although the soil is sampled under the waste program if it is put back in the excavation it should be included with samples in Table 8 rather than here.	Soil disposed of offsite is not included in residual contamination. Soil stockpile results greater than background means plus two standard deviations or MDLs were added to Table 8 and Figure 16 (now Figure 17).
21	Section 2.9 - Figure 18 needs to be modified to prevent confusion. The legend needs to include the sampling locations and not the line descriptions, which appear to be erroneous. If they are not erroneous, please explain the discrepancies between this figure and the previously presented information. The pipelines should be removed and only the excavated areas identified along with the sampling locations. However, all of the excavated areas that would effect the old samples should be shown, but only the shallow samples would be effected by the excavations, the deeper ones may not be effected. Excavations also occurred to remove the foundation, footers and other pipes.	This figure was changed.
	The legend on Figure 18 does not identify the color-coding for the pipes. Figure 18 - What is the extra line going south from B123 (manhole 2) to VV18? Only one line is identified on other figures.	Pipelines were removed from Figure 18 (now Figure 16). Please reference Figure 7. Two lines, one NPWL and one OPWL were at this location. The NPWL was removed, the OPWL was not.
22	Section 2.10.1 – the put-back soils need to be included in the SOR calculation.	The put-back soil was included in the SOR calculation (Table 7) and on Figure 16 (now Figure 17).

23	<p>Page 51, Table 12 – what is “pipe scale”, please describe. Why did water samples sent to Laboratory 559 have a high reporting limit?</p>	<p>Pipe scale is the easily removable material that formed on the inside of the pipe.</p> <p>The 559 Laboratory is used for quick count time analysis of relatively “hot” samples, not environmental samples where low detection limits are needed. As a result, their detection limits are typically higher than those provided by (environmental) offsite laboratories with longer count times.</p>
24	<p>Section 3.0 – The report indicates that PCBs were burned in the security incinerator and that potential chemicals of concern (PCOCs) at the site are dioxins, furans, and PCBs. As discussed above, several PCB congeners are classified as exhibiting dioxin-like properties. Therefore, when calculating a dioxin-equivalent concentration, it is important to recognize/include the contribution from this class of chemicals. However, at this site, only dioxin and furan congeners were incorporated into the TEQ approach. It would be appropriate to include the dioxin-like ones into this approach, or provide a reason as to why they were not evaluated.</p> <p>The TEFs utilized in this approach were obtained from the 1994 SW-846 Method 8290. These should be replaced with the values established in 1998 by the World Health Organization (WHO). The WHO values have been recently used by EPA Region 8 and CDPHE to assess dioxin and dioxin-like compounds in surface soils at numerous locations in the Denver Front Range Area and at the Rocky Mountain Arsenal. The WHO values are available in the following reference: Van den Berg, M. et al. 1998. Toxic Equivalency Factors (TEFs) for PCBs, PCDDs, PCDFs for Humans and</p>	<p>The PCBs within the PCOCs at RFETS consist of PCB mixtures, specifically, several of the Aroclors (for example, Aroclor 1016 and several of the 1200 series), and not the congeners listed in the referenced table. As a result, the PCB samples were analyzed for, and results compared with, the RFCA-stipulated PCBs and not individual congeners.</p> <p>For dioxin/furans, the TEFs given in SW8290 agree with those published by the WHO, with the exceptions of OCDD and OCDF, for which the WHO numbers are an order of magnitude less than those in SW8290. Use of the WHO numbers would result in smaller overall values (by an order of magnitude) for OCDD and OCDF congeners. These corrections have been incorporated into Table 20.</p>

<p>Wildlife. Environmental Health Perspectives 106: 775-792.</p> <p>The language used in Section 3.2 to describe the TEQ process is confusing and should be clarified. The value of 9, refers to 9 ppt (pg/g) dioxin which was calculated as a surface soil PRG for a wildlife refuge worker. The fact that this value is a PRG should be specified in the document. Referring to it simply as 9 toxicity equivalents is inappropriate, since the units and derivation of the value are missing. Additionally, the text indicates that the dioxin/furan TEQ was compared directly with the TEQ of 9 in Table 18. Whereas, congener-specific TEQs are provided, no comparison is shown and furthermore this comparison should not be on a congener specific basis, but should be on the sum of all congener specific TEQs. The text should be revised to indicate that the total TEQ (sum of all congeners) was higher/lower than the 9ppt PRG value.</p> <p>According to Figure 20, the maximum concentration of each congener was not used in Tables 17 & 18. For example, the maximum concentration of OCDD is presented as 180 pg/g in the tables, however, a maximum of 290 pg/g is observed in Figure 20 at location BT39-A003. This occurs for several congeners, resulting in an underestimation of the presented TEQ concentrations.</p> <p>Table 18 should be expanded to include the sum of all congener-specific TEQ values. This sum is the Total TEQ for the mixture and is the value that is comparable to the health-based value. The comparison should not be performed on a congener-by-congener basis, since it is the</p>	<p>Values used for comparative purposes were derived from E. Pottorff correspondence (e-mail) dated January 25, 2002. The proposed PRGs have not yet been formally presented to the public (through the public comment process) or incorporated into RFCA. Until proposed PRGs are formally incorporated into RFCA, reference to PRGs in this document is premature.</p> <p>The text was revised to compare only dioxin results with the 9 ppt. TEQ summation values are provided, per sample, in Table 21, but are not compared to an AL, because one does not currently exist.</p> <p>The following text was added: "All summated TEQ values are well within the cited Front Range background range of 0.1 to 155 TEQ."</p> <p>Table 17 (now Table 19) was corrected. Results were deleted from Table 18 (now Table 20) and the congeners were summed and presented in Table 21.</p> <p>The sum of dioxin and furan congener TEQs, by sampling location, is presented in a new table, Table 21. The following text was added to Section 6.2: "The TEQ values for dioxin congeners are summed for each sampling location and the TEQ values for furan congeners were summed for each sampling location. These data are presented in Table 21. As shown in</p>
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<p>total dioxin equivalent concentration that is the decision basis.</p> <p>Table 17 & Table 18: The units of concentration for the PCDDs and PCDFs should be provided.</p> <p>Table 18: TEF values are unitless (ie., NOT pg/g)</p>	<p>Table 21, there are no exceedances of the 9 ppt TEQ for the summed dioxin compounds."</p> <p>Units were added to Table 17 (now Table 19). The column of maximum values on Table 18 (now Table 20) was deleted.</p> <p>Table 18 (now Table 20) was corrected.</p>
<p>Recognizing that the dioxin-like PCB congeners were not analyzed, a discussion of the uncertainty stemming from the lack of these values should be provided. The Front Range dioxin study (EPA 2001) has shown that the PCB congeners can contribute 20% or more of the total TEQ in ambient soil samples. Therefore, values based on dioxin and furan congeners alone may only represent a portion of the actual risk. This uncertainty should be acknowledged somewhere in this document.</p> <p>The other value that changes using the WHO values is for 1,2,3,7,8-PeCDD, which increases from 0.5 to 1.0. The table and resulting values should be updated to reflect this change.</p> <p>Regardless of whether this value is referred to as a PRG or not, the basis for the derivation of the value (eg., surface soil ingestion for a wildlife refuge worker) should be provided. The units of ppt for the first reference of 9 toxicity equivalents (Section 3.2.1) need to be added.</p> <p>I was unable to locate a discussion in the text that compared only dioxin result (2,3,7,8-TCDD) with the 9</p>	<p>Analytical requirements and MDLs were determined by CDPHE. A discussion of PCB risk and its uncertainty is beyond the scope of the Closeout Report.</p> <p>This value was corrected in Table 20 and the resulting values were changed in Table 21.</p> <p>A discussion of the derivation of the soil ingestion values for the wildlife refuge worker is not appropriate in this document because a discussion of risk and the derivation of ALs or PRGs is beyond the scope of this document.</p> <p>Ppt was added to all occurrences of 9 TEQ.</p> <p>The following text was added: "Additionally, the maximum 2,3,7,8-TCDD TEQ of 6.8 ppt was less than the 9 ppt TEQ</p>

ppt TEQ value.

Units of ppt need to be included when referencing the Front Range data. Also, please include a reference (EPA, 2001) for this data source. It should be noted that the range of values is for the sum of CDD and CDF congeners. Lastly, in the Front Range document, it was determined that two of the high concentrations were outliers. The revised range is 0.1 to 57.5 ppt. Technically, these should not be referred to as background concentrations, but rather ambient concentrations.

The overall TEQ approach seems to be misinterpreted in this section, therefore, the following provides a brief summary. The term "dioxin" refers to a group of chemical compounds that share certain chemical structures and mode-of-action biological characteristics. A total of 30 of these dioxin-like compounds exist and are members of three closely related families: the chlorinated dibenzo-p-dioxins (CDDs), chlorinated dibenzofurans (CDFs) and certain polychlorinated biphenyls (PCBs). As a result, EPA and others use an approach that adds together the toxicity of individual dioxins (congeners) in order to evaluate complex environmental mixtures to which people are exposed. Because dioxins differ in their toxic potential, the toxicity of each component in the mixture can be accounted for by applying a Toxicity Equivalency Factor (TEF). Using these factors, the toxicity of a mixture can be expressed in terms of its Toxicity Equivalents (TEQ), which is the amount of 2,3,7,8-TCDD it would take to equal the combined toxic effect of all the dioxins found in that mixture. The resulting TEQ value is the sum of ALL dioxin-like

value."

Ppt was added to the Front Range data discussion. This information was derived by CDPHE.

The background values were provided by CDPHE in an e-mail from E. Pottorff dated January 25, 2002 and stated the following: "EPA recently published the results from the RMA Denver Front Range Dioxin Study (U.S. EPA Region 8, July 2001). The background study of the fine fraction of 162 front range soil samples ranged from 0.1 ppt (parts/trillion) to 155 ppt TEQ."

Thank you for the detailed information on PCBs, dioxins and furans.

The sum of the CDD and CDF values for each sampling location was added to Table 21. Additionally, the text was changed as follows: "Results at one location, BT39-003 indicate a value of 10.87 for the summed dioxin and furan congeners. While this

	congeners found in a sample. Although presenting the TEQ for CDDs and CDFs separately allows the reader to see which family constitutes the majority of the toxicity, these values require summation prior to comparison with a reference value (e.g., 9 ppt). Therefore, in order to appropriately assess the overall risk from dioxins, an additional column in Table 21 should be added, which provides the sum of the CDD and CDF values.	value is slightly greater than the reference value of 9ppt TEQ it as well as all other summated TEQ values are well within the cited Front Range background range of 0.1 to 155 ppt TEQ.
25	Appendix B – The analytical method column lists HPGe rather than Gamma Spectroscopy, isn't there a difference between these methods? Unrelated sample results seem to be included after the second page of 100-611 data, they appear to be from the 886 and 889 sampling. Please provide replacement pages for all of the pages with over typing on them. This includes pages 9, 10, 12, 13, & 14 of the UBC 123 data.	HPGe is the crystal used in gamma spectroscopy and is frequently used as an abbreviation for gamma spectroscopy. The pages with data from other IHSS groups were deleted. The pages with overprinting were reprinted.

APPENDIX E
PROPOSED RFCA ACTION LEVEL COMPARISON

176 / 176

Appendix E

IHSS Group 100-5 Proposed RFCA Action Level Comparison

IHSS Group	IHSS/PAC/UBC Site	Analyte	Maximum (µg/kg)	MDL (µg/kg)	WRW AL (µg/kg)	Eco AL (µg/kg)
100-5	100-609 – Security Incinerator	Aroclor-1016	19.5	<.069	46400	–
		Aroclor-1221	ND	<.069	12400	–
		Aroclor-1232	ND	<.069	12400	–
		Aroclor-1242	23	<.069	12400	–
		Aroclor-1248	42	<.069	12400	–
		Aroclor-1254	30	<.069	12400	–
		Aroclor-1260	17.5	<.069	12400	–
		Analyte	Maximum (pg/g)	RDL (pg/g)	WRW AL (pg/g)	Eco AL (pg/g)
		1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	33	<.22	NA	NA
		1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	6.2	<.22	NA	NA
		1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.34	<.22	NA	NA
		1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.23	<.22	NA	NA
		1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	1.5	<.22	NA	NA
		1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	1.2	<.22	NA	NA
		1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	1.2	<.22	NA	NA
		1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	1.2	<.22	NA	NA
		1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	1.2	<.22	NA	NA
		1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.82	<.22	NA	NA
		1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	4.3	<.22	NA	NA
		2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.82	<.22	NA	NA
		2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	1.9	<.22	NA	NA
		2,3,7,8-Tetrachlorodibenzofuran (TCDF)	12	<.22	NA	NA
		2,3,7,8-Tetrachlorobenzodioxin (TCDD)	6.8	<.22	NA	NA
		1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	290	<.22	NA	NA
		1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	16	<.22	NA	NA

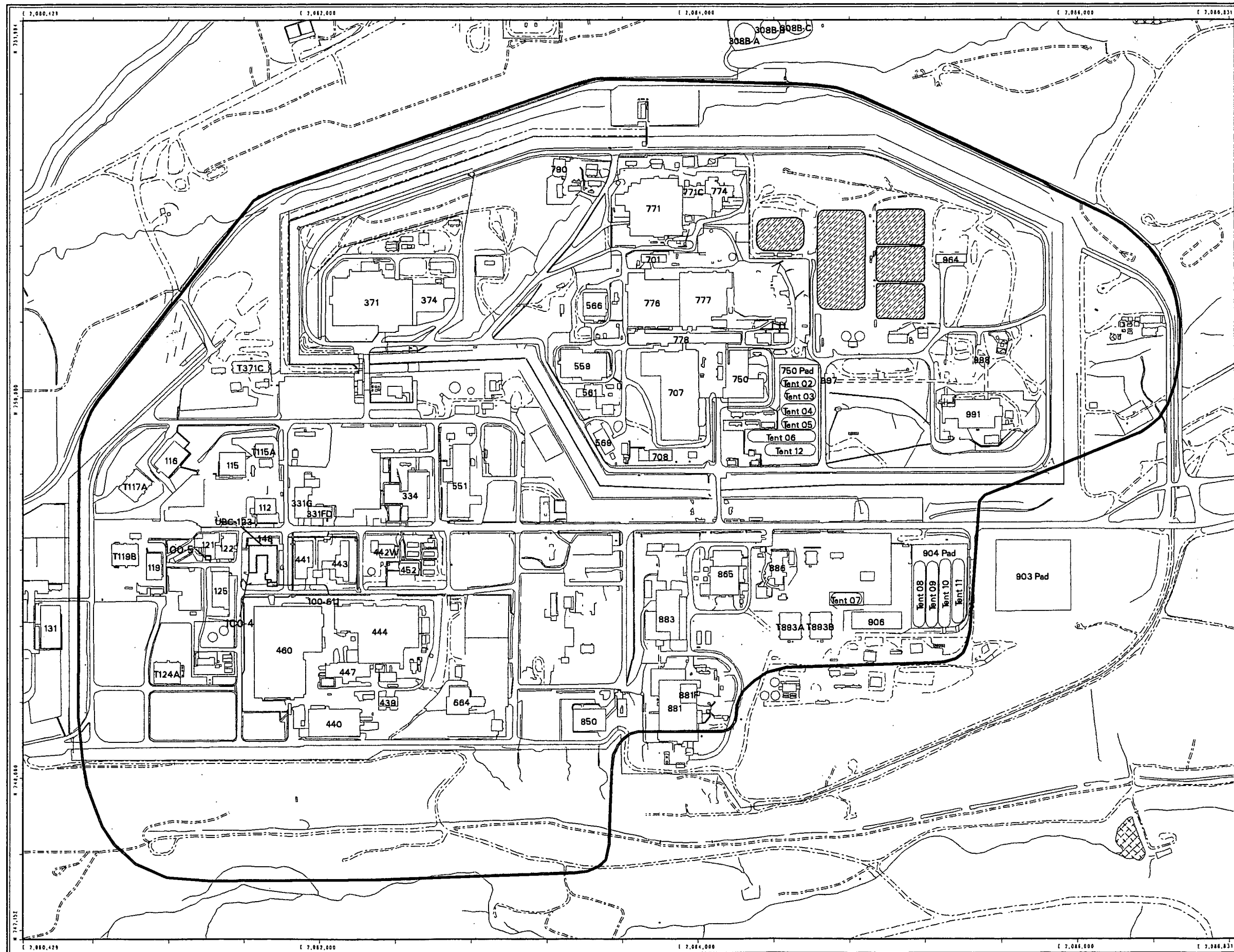


Figure 1
IA Groups Location Map

EXPLANATION

IHSS Groupings

- 100-4
- 100-5

Standard Map Features

- Buildings and other structures
- Solar Evaporation Ponds (SEPs)
- Lakes and ponds
- Streams, ditches, or other drainage features
- Fences and other barriers
- Paved roads
- Dirt roads
- Industrial Area Operable Unit Boundary

DATA SOURCE BASE FEATURES:
 PACA
 Historical Release Report (HRR)
 2nd Annual Update
 Sept. 30, 1997
 Individual Hazardous Substance Sites (IHSS)
 DOE, 1992, HRR Report and Subsequent Updates.
 Buildings, fences, hydrographic roads and other
 structures from 1994 aerial fly-over data
 captured by EGBG RSL, Las Vegas.
 Digitized from the orthophotograph. 1/95



Scale = 1 : 6240
 1 inch represents 520 feet



State Plane Coordinate Projection
 Colorado Central Zone
 Datum: NAD27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

GIS Dept. 803-866-7707

Prepared by:

DynCorp
 THE ART OF TECHNOLOGY

Prepared for:

KAISER-HILL
 COMPANY

MAP ID: 02-0121

January 07, 2002

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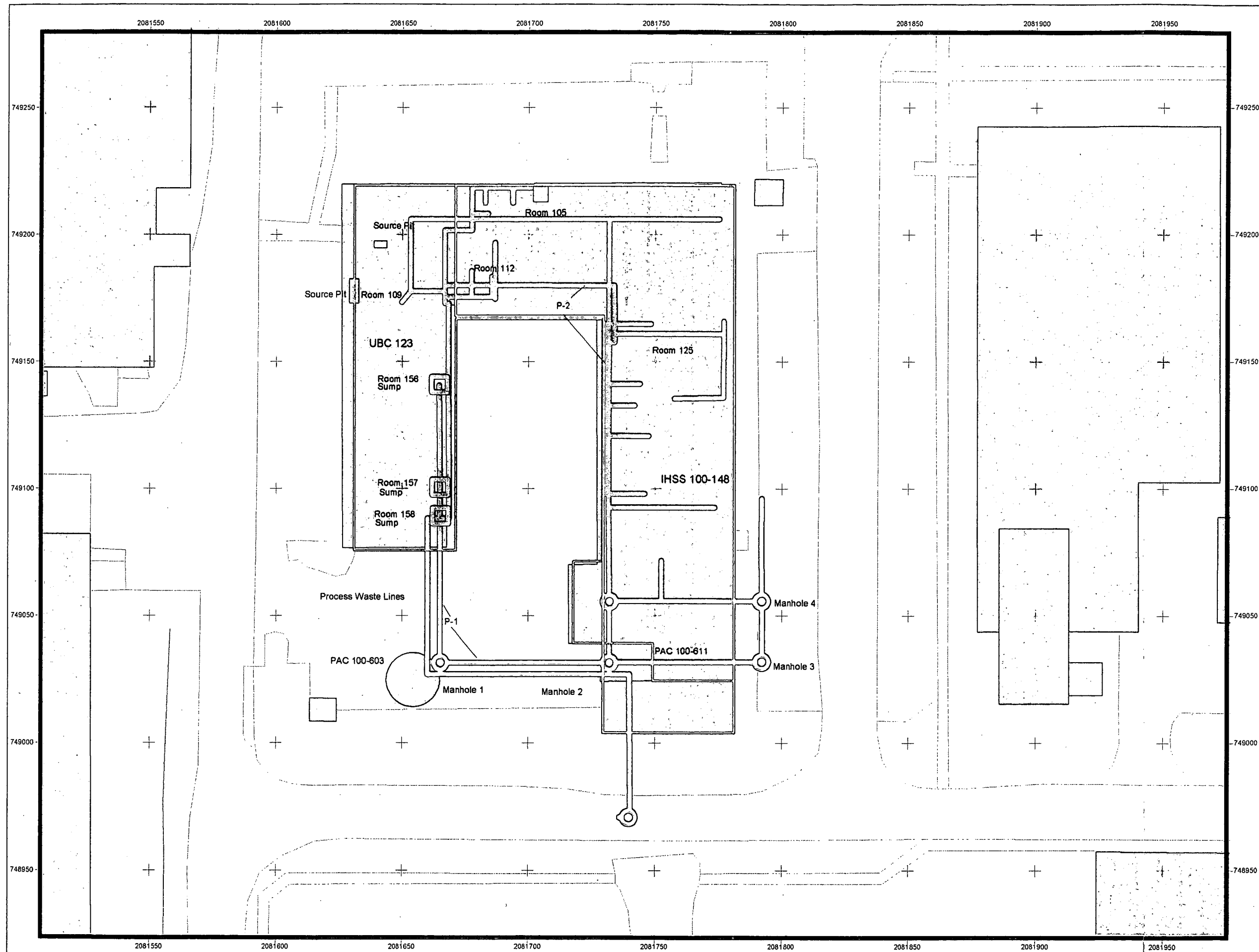
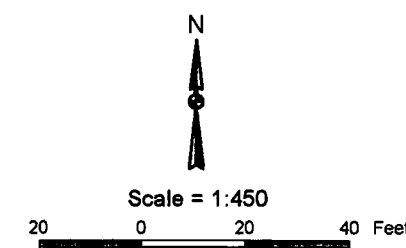


Figure 2
IHSS Group 100-4

KEY

- FY 2002 IHSS locations
- FY 2002 PAC locations
- Buildings and other structures
- Process Waste Line
- Paved areas
- Dirt roads
- Streams, ditches, or other drainage features

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13

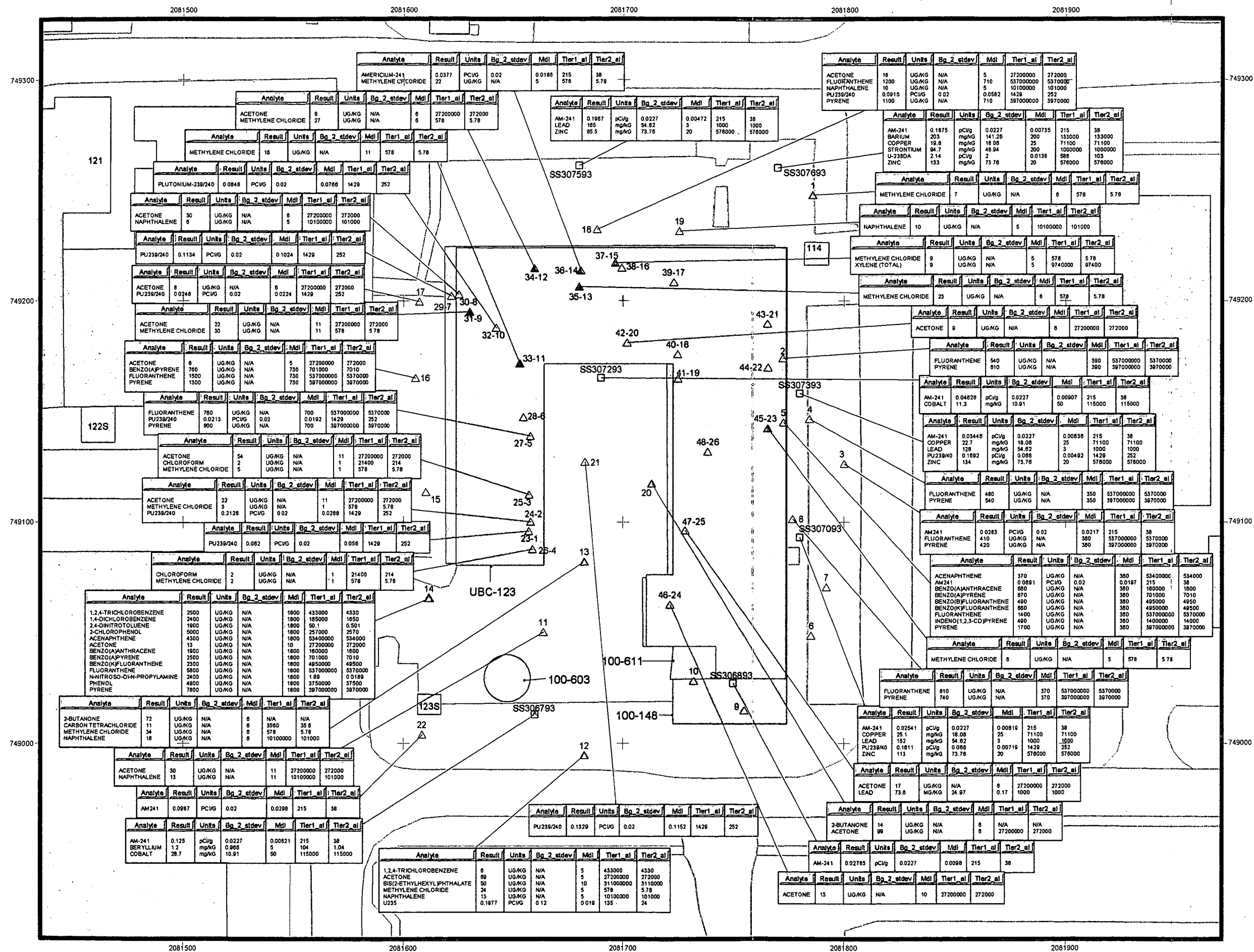


Figure 3
Location of Pre-Accelerated
Action Sample Results
Above Detection Limits or
Background Levels for IA Group
100-4 (100-148, 100-603,
100-611, and UBC 123)

KEY

FY 2002 IHSS location

FY 2002 PAC location

FY 2002 UBC location

Building/structure

Paved area

Dirt road

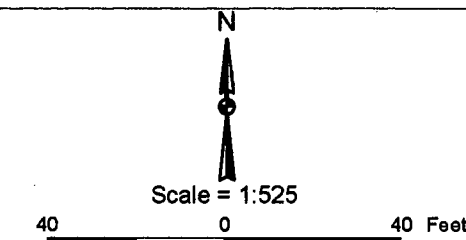
Stream, ditch, or other
drainage feature

Existing soil sampling locations

Both subsurface and
surface soil

Subsurface soil

Surface soil



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September 2002

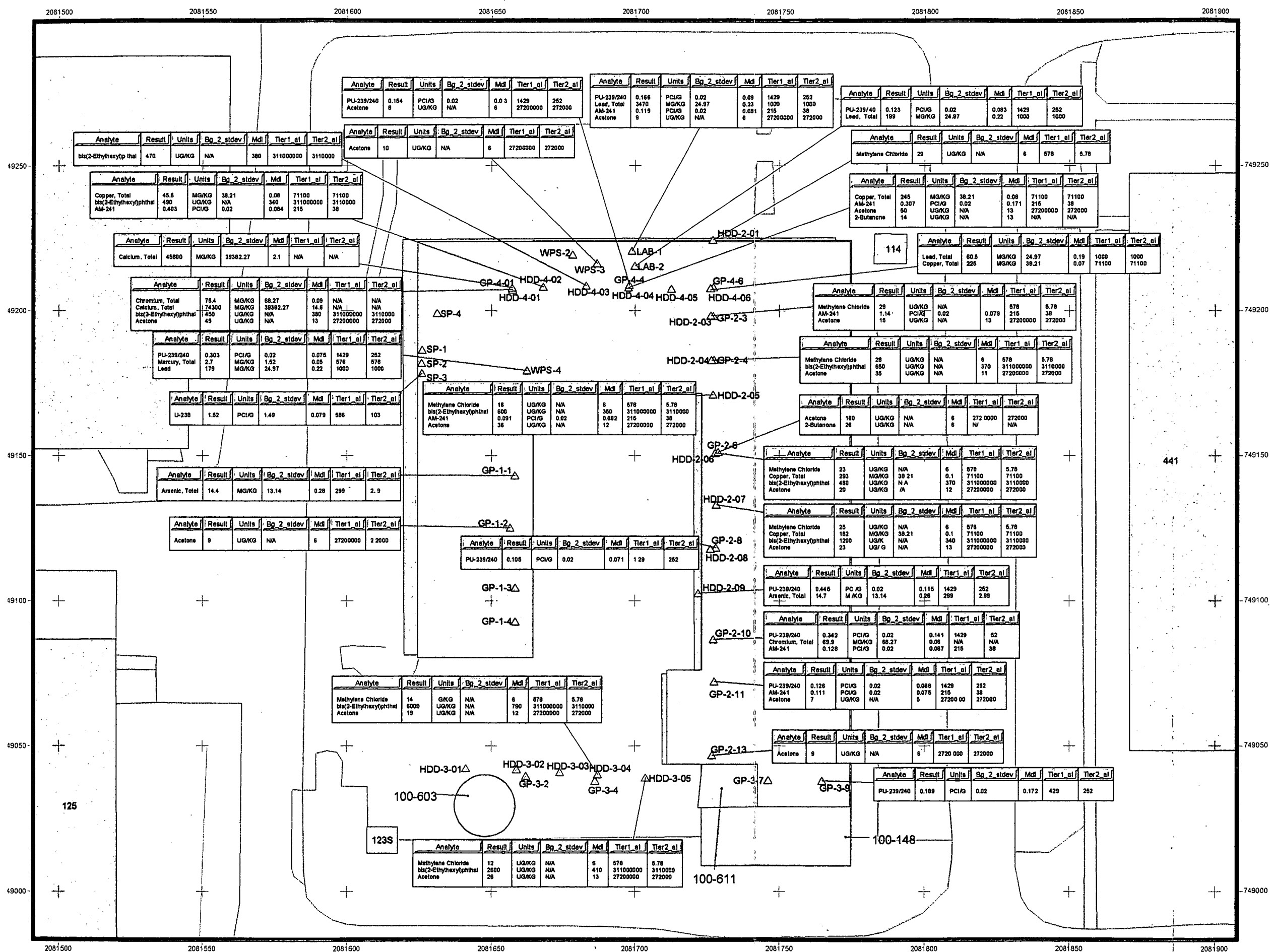


Figure 4
Location of Pre-Accelerated Sample Results Above Detection Limits or Background Levels Collected at UBC 123 (IA Group 100-4) in November 2000

KEY

- FY 2002 IHSS location
- FY 2002 PAC location
- FY 2002 UBC location
- Building/structure
- Paved area
- Dirt road
- Stream, ditch, or other drainage feature

- Existing soil sampling locations
- Both subsurface and surface soil
 - Subsurface soil
 - Surface soil



Scale = 1:400

10 0 10 20 30 Feet

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postings-02 susan 12-03-01hr.apr
16 November 2001

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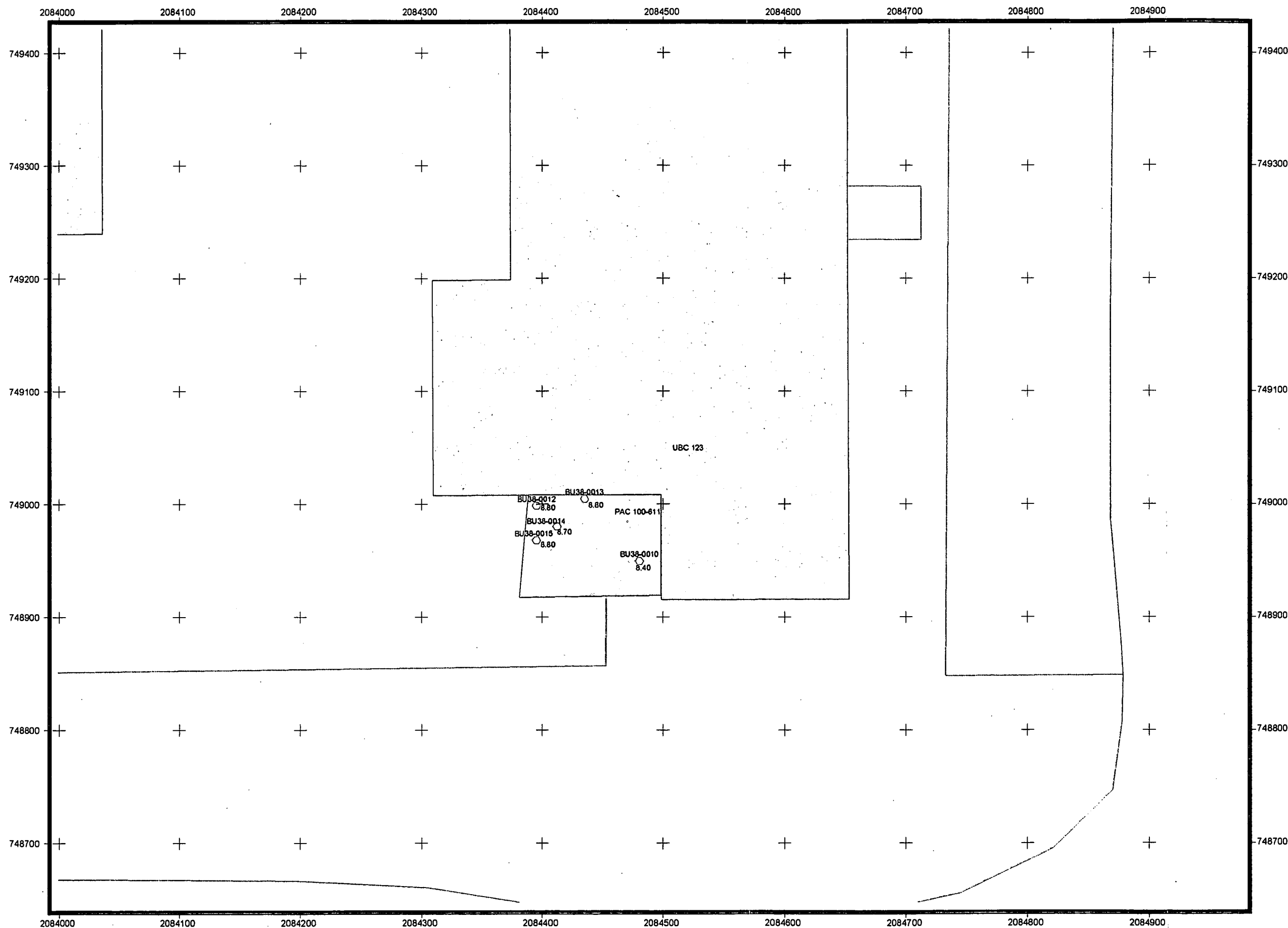


Figure 5
Characterization Sampling
Locations and Results
at PAC 100-611

Key

- Sampling Locations
- 100-611
- ▭ Buildings and other structures
- ▧ Paved areas
- ▨ Dirt roads
- ▩ Drainage Features

pH Results
 Reported in Standard Units

N

Scale = 1:100

2 0 2 4 Feet

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 Colorado Central Zone
 Datum: NAD 27

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100-4100-5drr:

2003

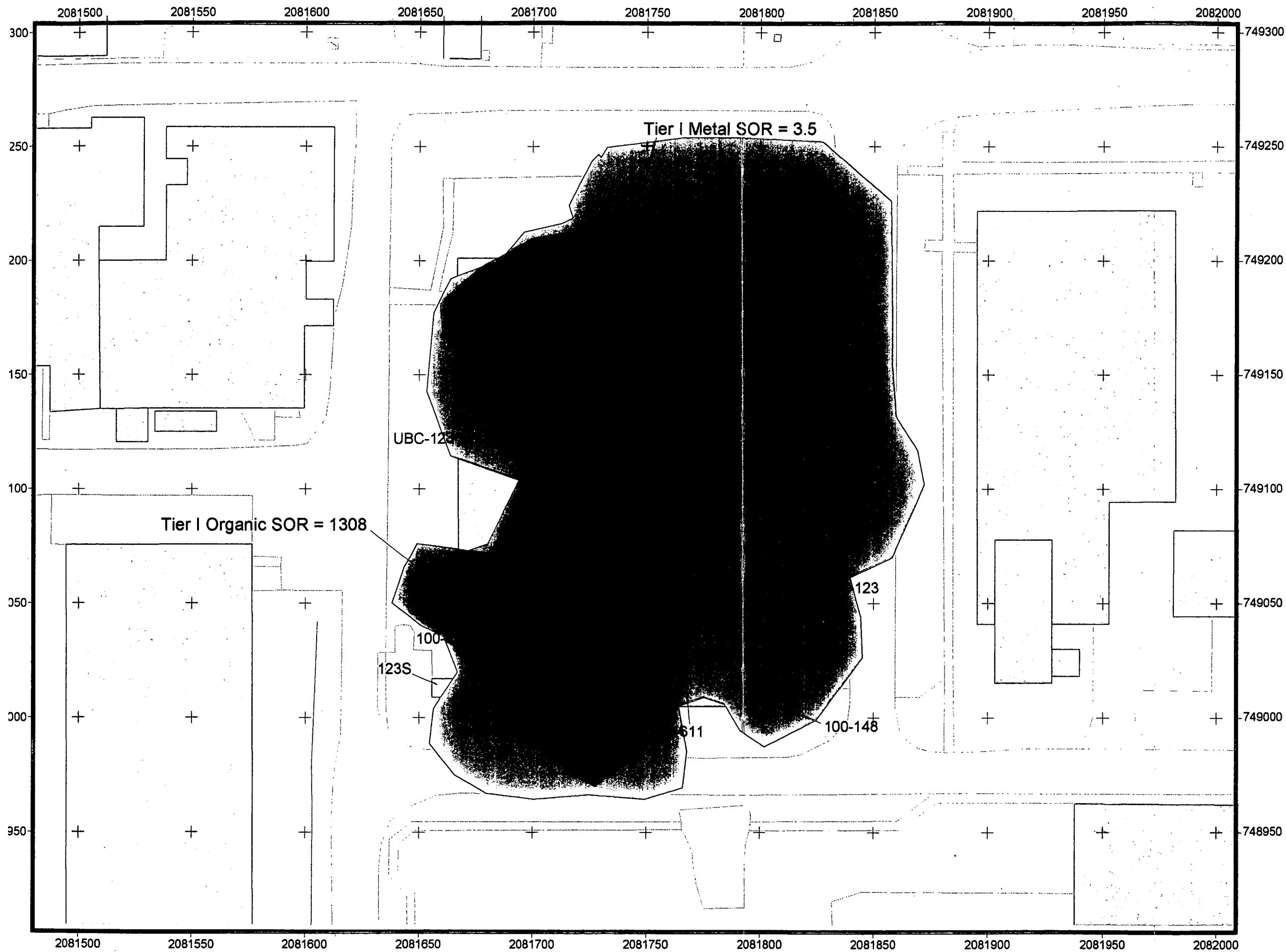


Figure 6
IHSS Group 100-4
Area of Concern

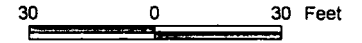
KEY

- Area of Concern
- Tier II
- Tier I
- Buildings and other structures
- Paved areas
- Dirt roads
- Streams, ditches, or other drainage features

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Scale = 1:550



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22

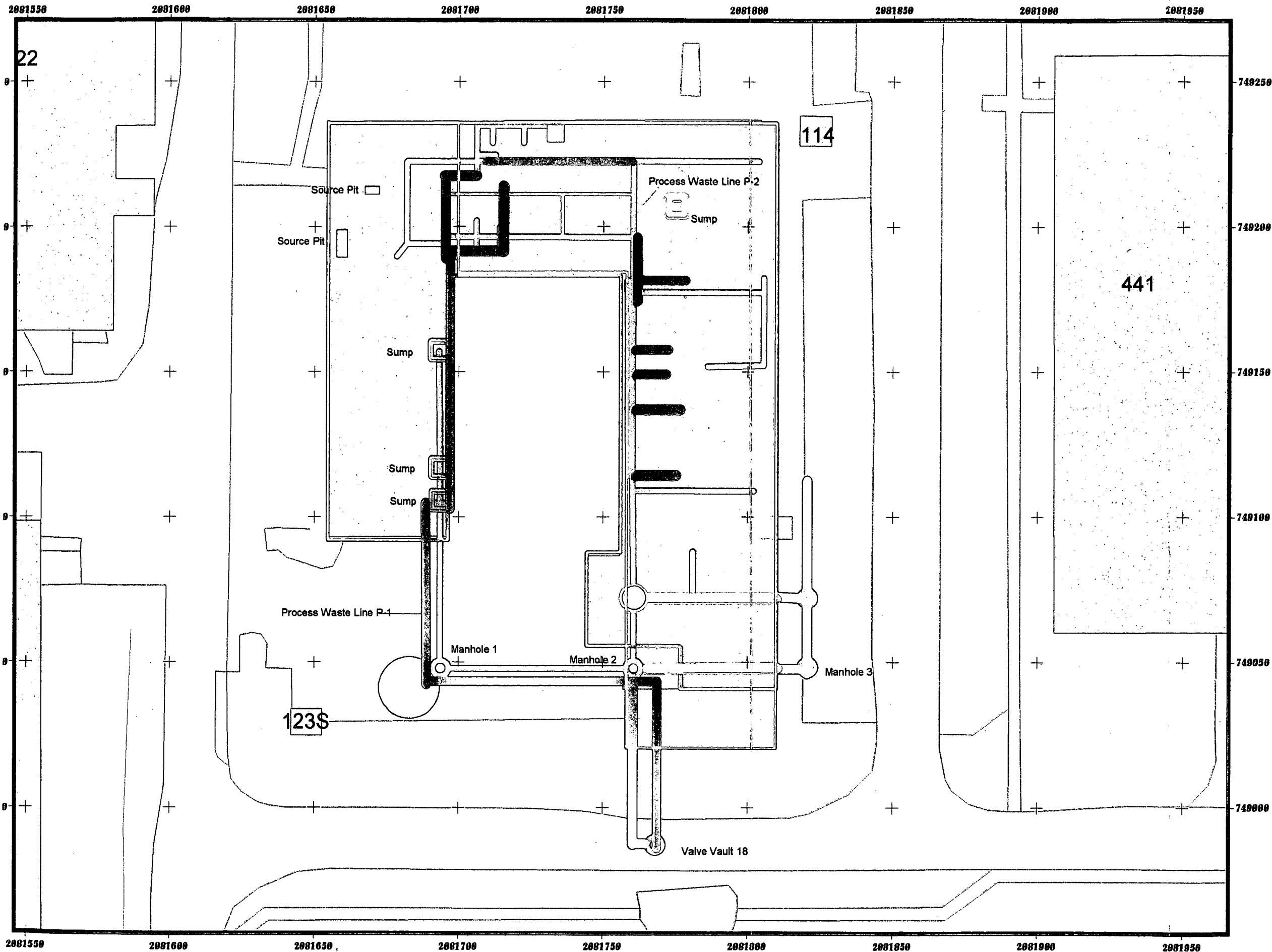


Figure 7
IHSS Group 100-4
Process Waste Lines

- KEY**
- Underground Process Waste Line - Removed
 - Above Ground Process Waste Line - Removed (D&D)
 - Process Waste Line - Left in Place
 - Process Waste Line - Not Found
 - FY 2002 IHSS locations
 - FY 2002 PAC locations
 - FY 2002 UBC locations
 - Buildings and other structures
 - Paved areas
 - Dirt roads
 - Streams, ditches, or other drainage features



Scale = 1:400



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 Colorado Central Zone
 Datum: NAD 27

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25

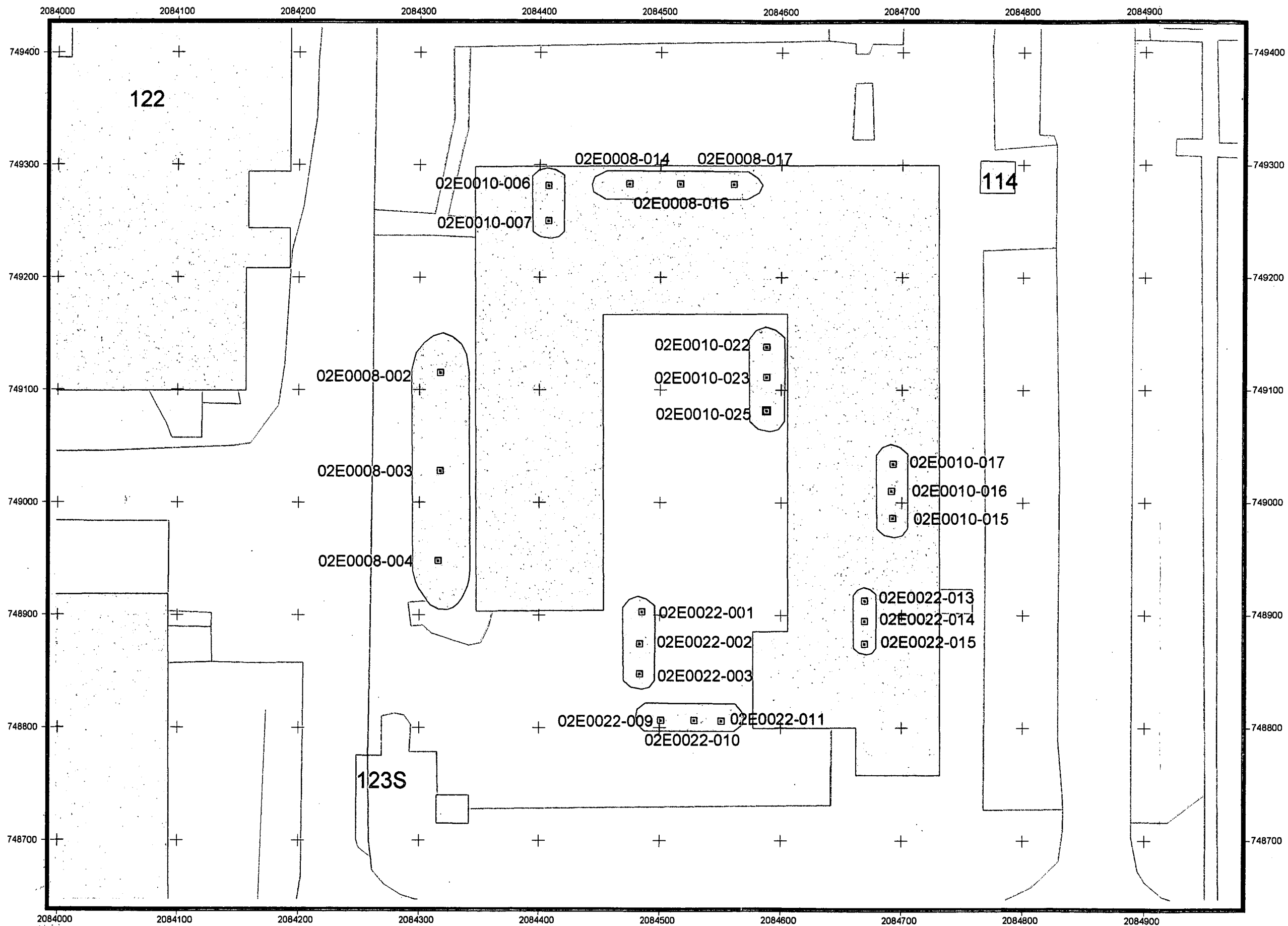


Figure 8
Location of Soil Stock Piles

Key

- Stock Pile Samples
- Waste Piles
- ▤ Paved areas
- ▤ Dirt roads
- ▤ Drainage Features
- ▤ Buildings and other structures

N

Scale = 1:500

10 0 10 20 Feet

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2003

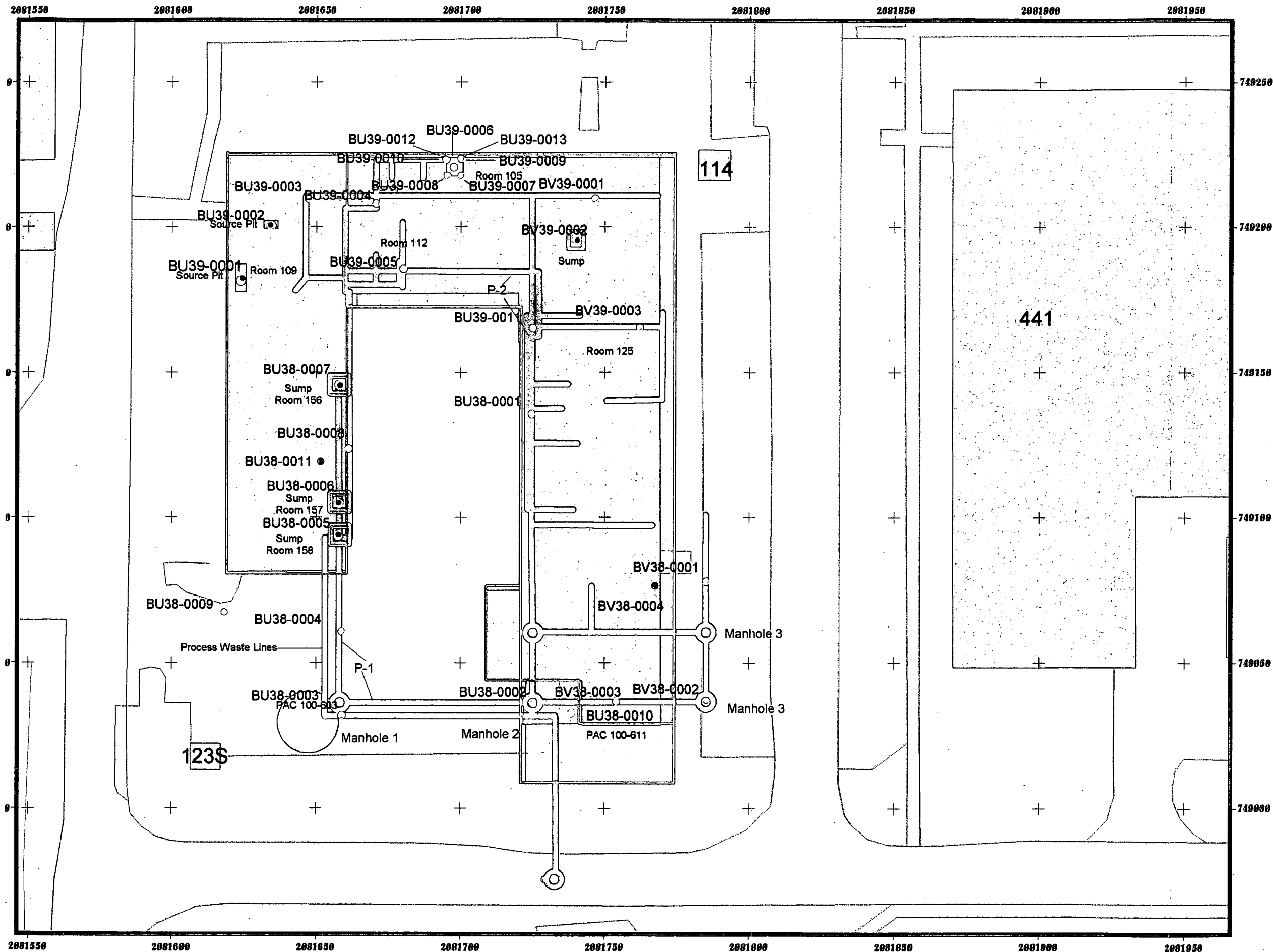


Figure 9
IHSS Group 100-4
Planned Confirmation
Sampling Locations

KEY

- Process Waste Lines
- Confirmation Sampling Location
- HPGe Sampling Location
- FY 2002 IHSS locations
- FY 2002 PAC locations
- FY 2002 UBC locations
- Buildings and other structures
- Paved areas
- Dirt roads
- Streams, ditches, or other drainage features



Scale = 1:400

25 0 25 Feet

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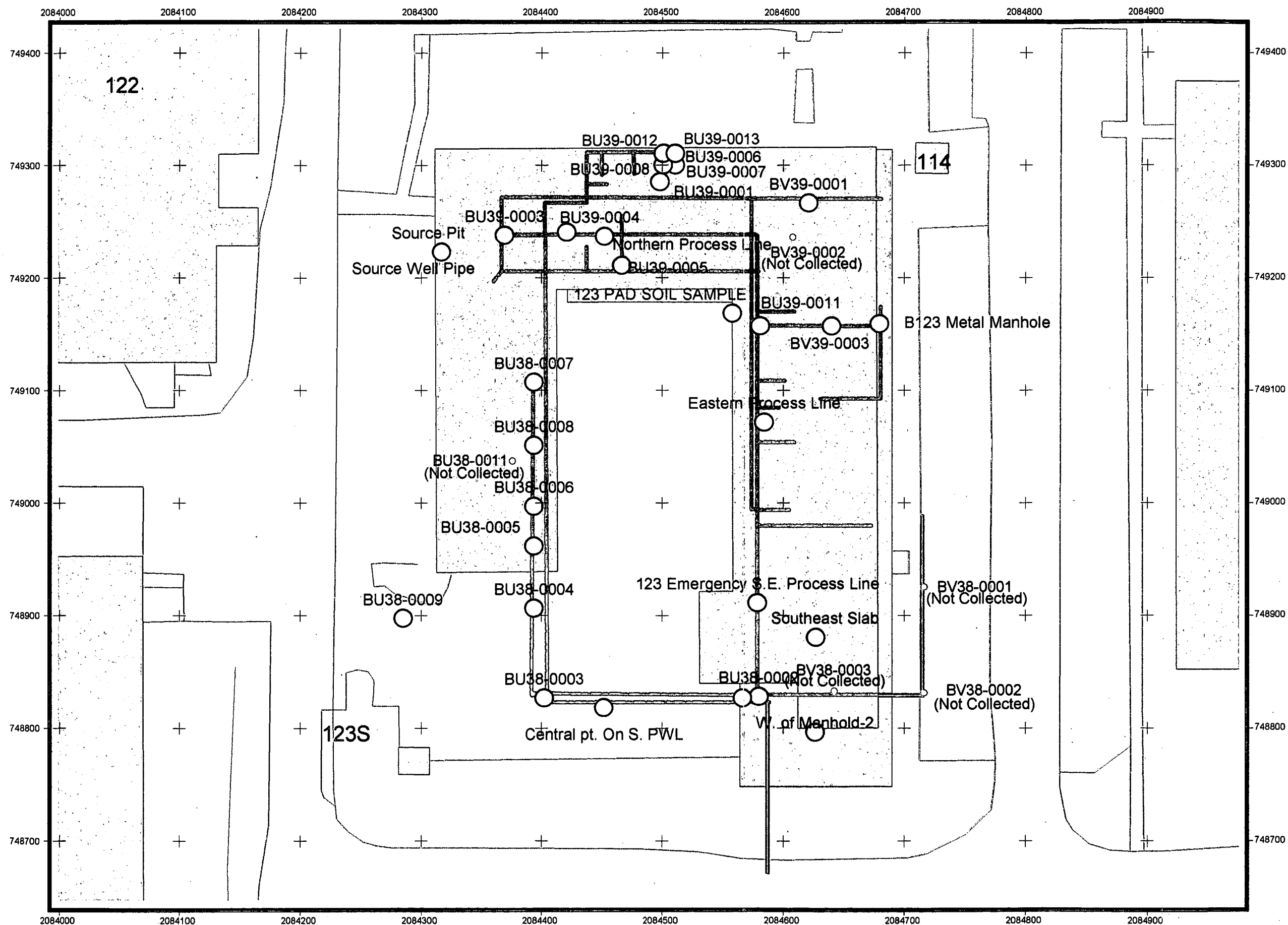


Figure 10
IHSS Group 100-4
Actual Confirmation
Sampling Locations

Key

- Confirmation Samples
- Samples Not Collected
- Process Waste Lines Left In Place
- Process Waste Lines Removed
- Pits-as-built
- Buildings and other structures
- IHSS 148
- Paved areas
- Dirt roads
- Drainage Features

N

Scale = 1:500

10 0 10 20 Feet

State Plane Coordinate Projection
 Colorado Central Zone
 Datum: NAD 27

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100-4100-5drr

2003

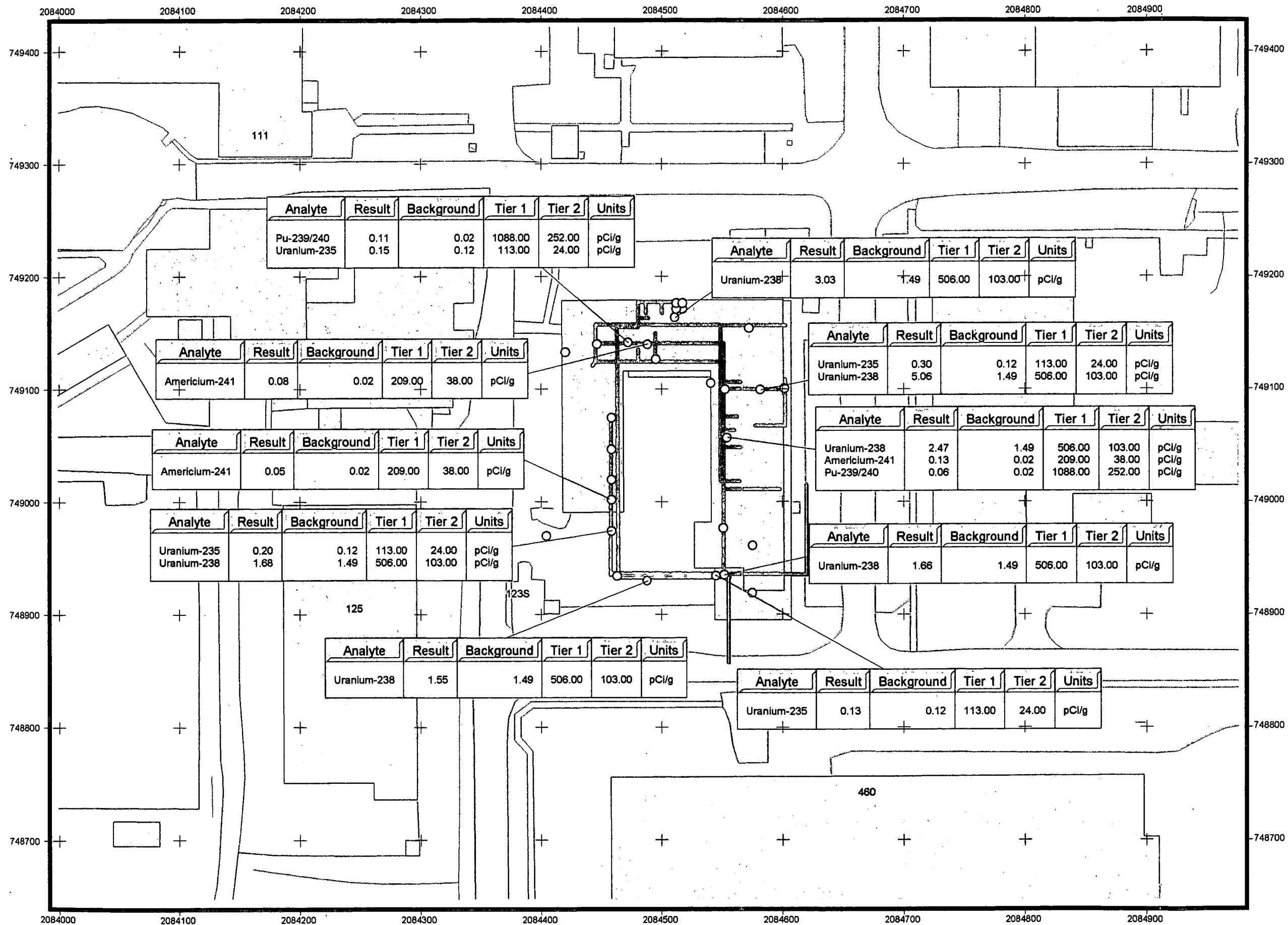


Figure 11
Confirmation Sampling Results
Greater Than Background Plus
Two Standrd Deviations or
Method Detection Limits

Key

- Process Waste Lines Left In Place
- Confirmation Samples
- Process Waste Lines Removed
- Pits-as-built
- Buildings and other structures
- IHSS 148
- Paved areas
- Dirt roads
- Drainage Features



Scale = 1:700

30 0 30 Feet

State Plane Coordinate Projection
 Colorado Central Zone
 Datum: NAD 27

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100-4100-5drr

2003

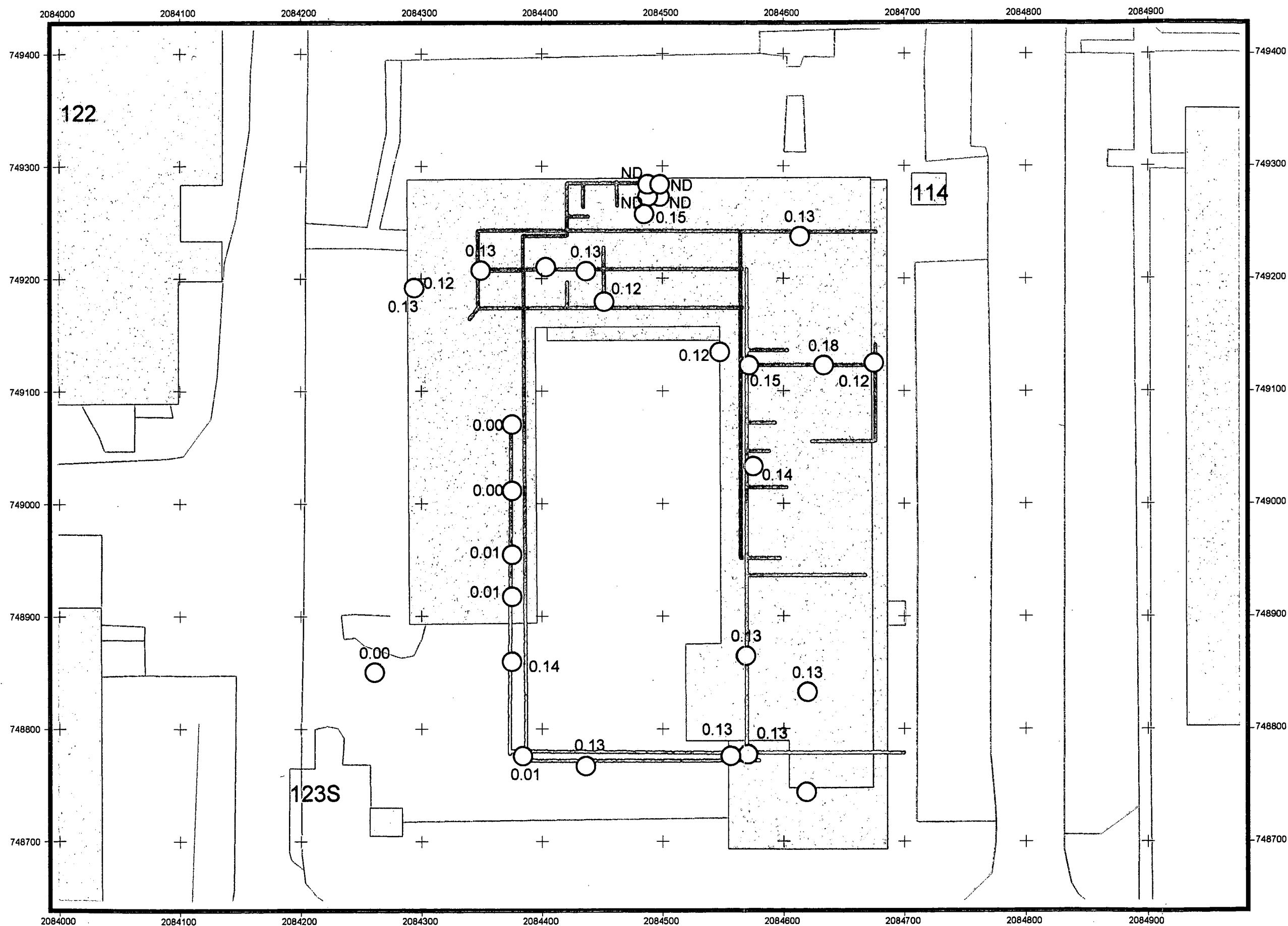


Figure 12
RFCA Tier II Radionuclide
Sum of Ratios

Key

- Confirmation Samples
- ~ Process Waste Lines
- ▭ Buildings and other structures
- ▭ IHSS 148
- ▭ Paved areas
- ▭ Dirt roads
- ▭ Drainage Features

ND No Data



Scale = 1:500

10 0 10 20 Feet

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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100-4100-5drr

2003

36

Figure 14
UBC 123 RCRA Unit 40

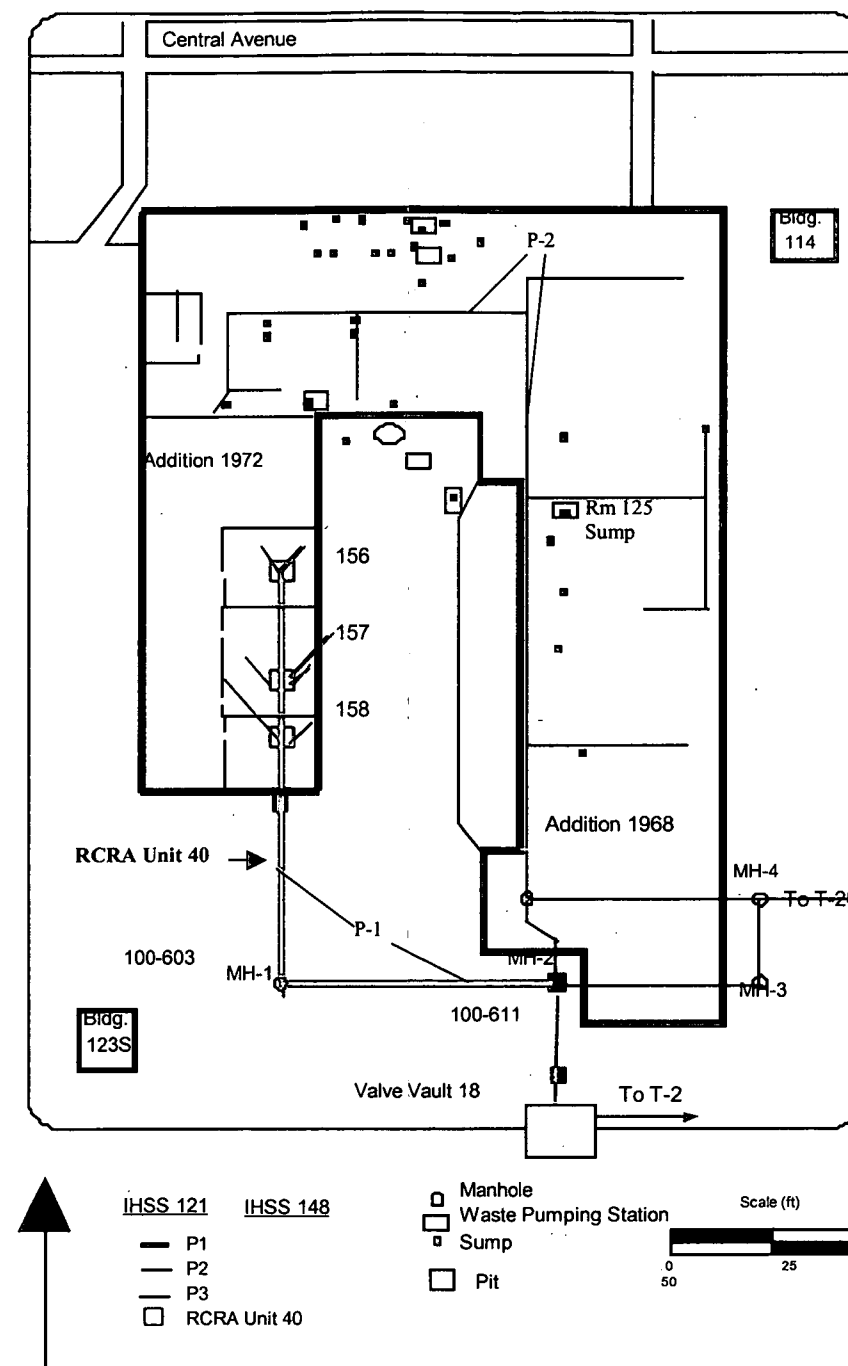
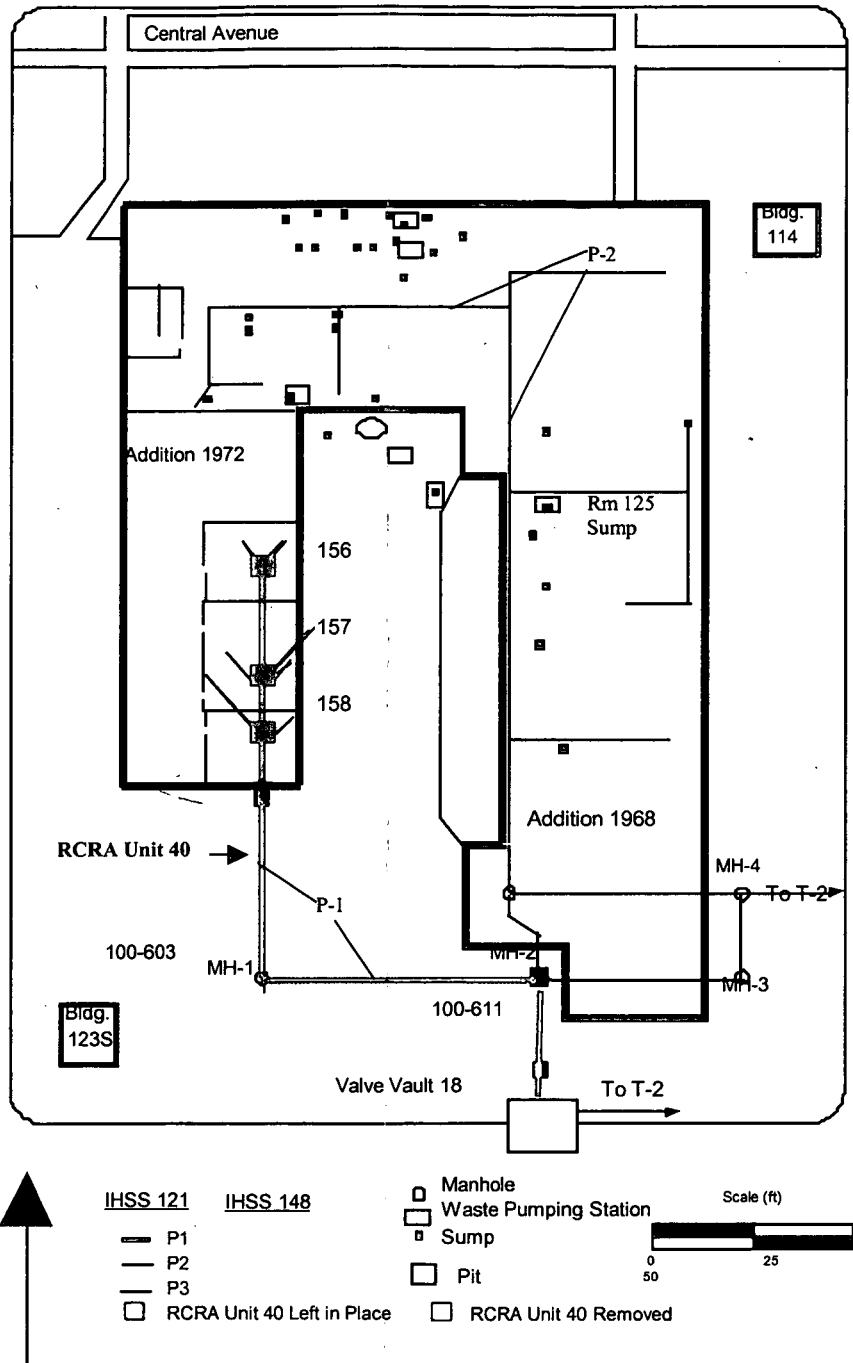
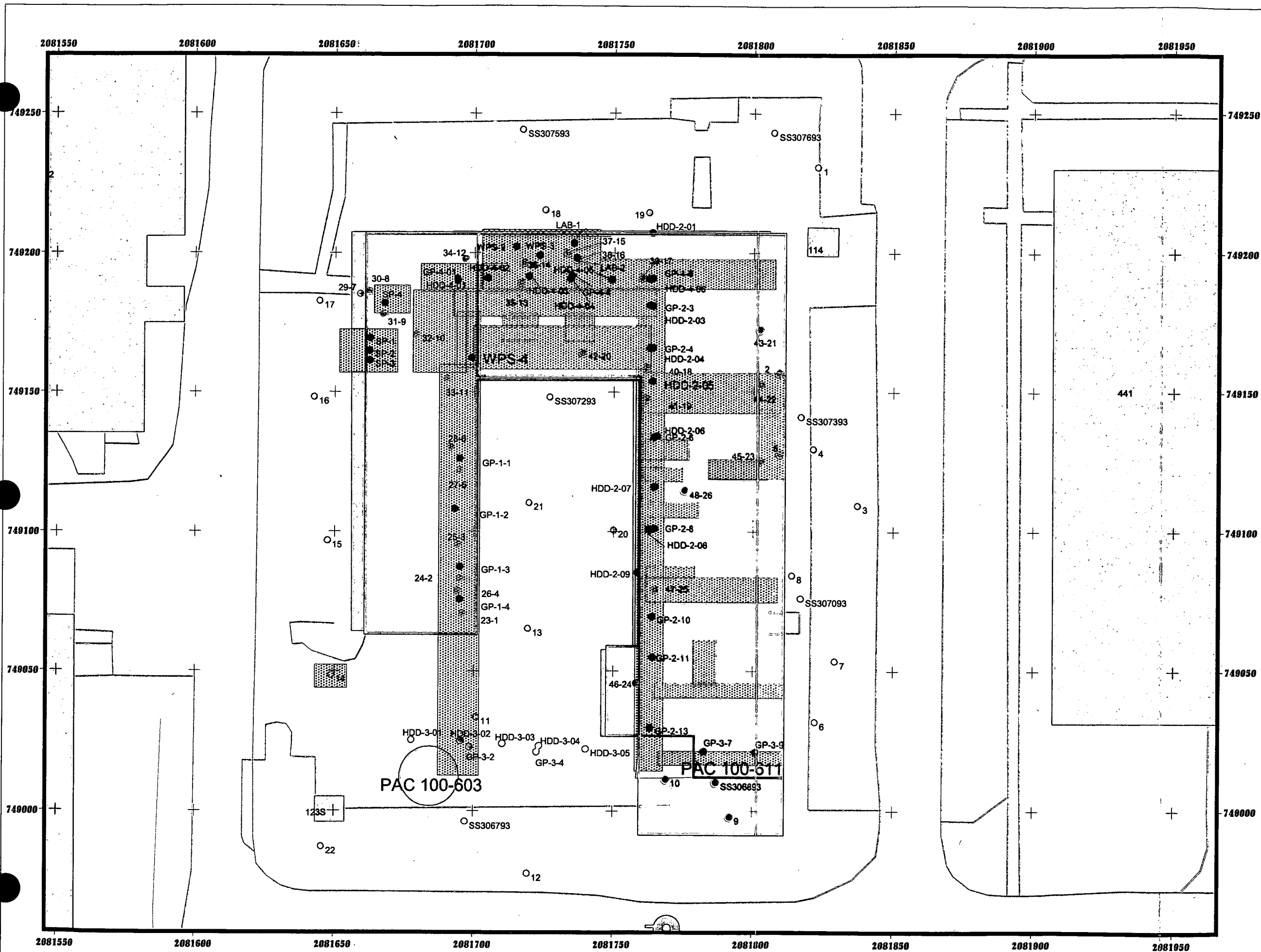











Figure 15
RCRA Unit 40 Pipeline Removed and Left in Place





**Figure 16
IHSS Group 100-4
No Longer Representative
Samples**

KEY

- Excavation Area
(Approximate)**
-  FY 2002 IHSS locations
-  FY 2002 PAC locations
-  FY 2002 UBC locations
-  Buildings and other structures
-  Paved areas
-  Dirt roads
-  Streams, ditches, or other drainage features
-  Existing sampling location
-  HDD project sampling location



Scale = 1:350



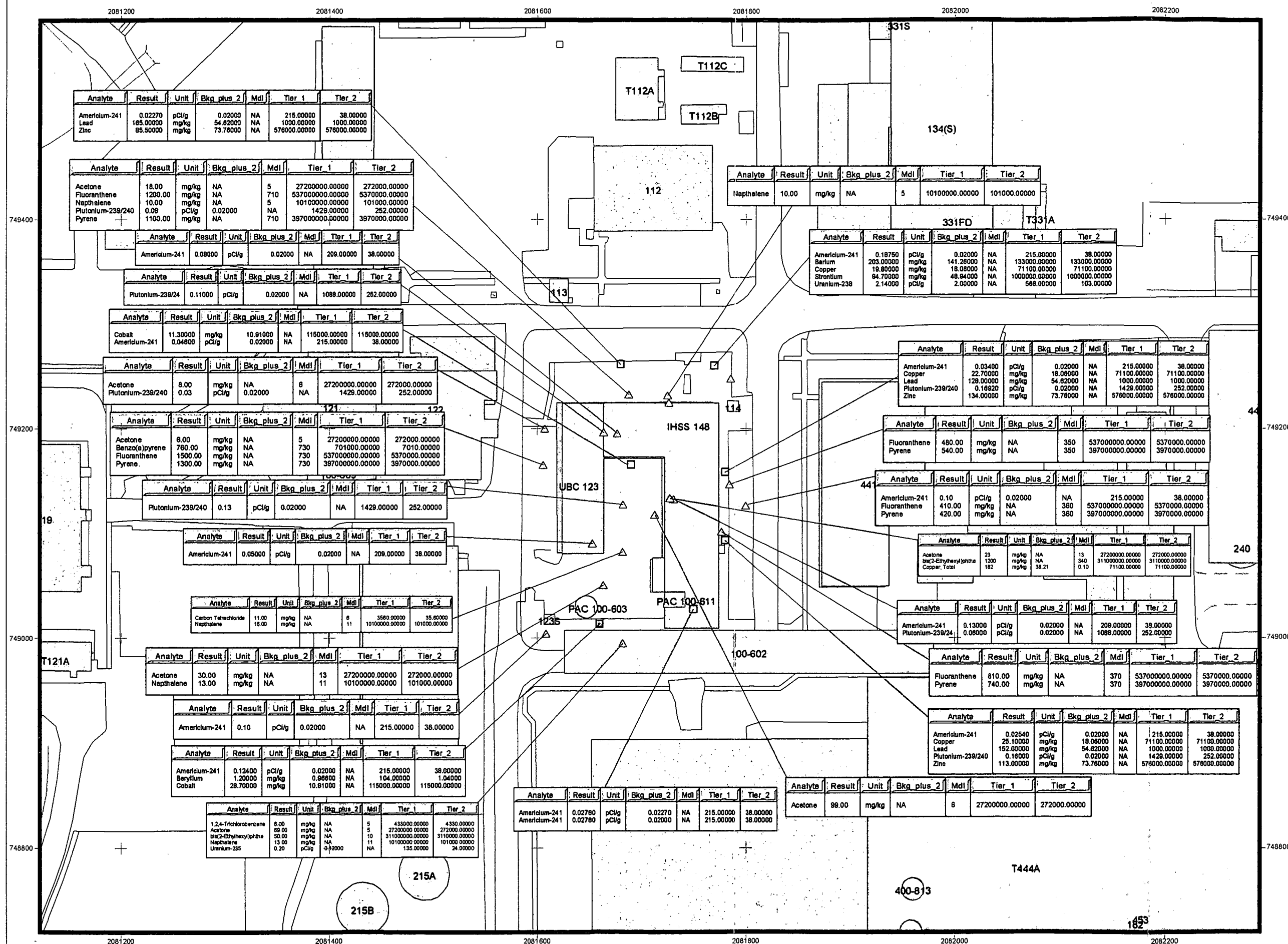
State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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Figure 17
Residual Contamination
IHSS Group 100-4



- KEY**
- IHSS
 - UBC
 - Building
 - Stream, ditch, or other drainage
 - Paved area
 - Fence
 - Dirt road
 - Pre-accelerated action surface soil sampling location
 - Pre-accelerated action subsurface soil sampling location below Tier II AL
 - Confirmation subsurface soil sampling location below Tier II AL

Note: For organics, mg/kg = ug/kg



Scale = 1:1,100

30 0 30 60 Feet

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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54

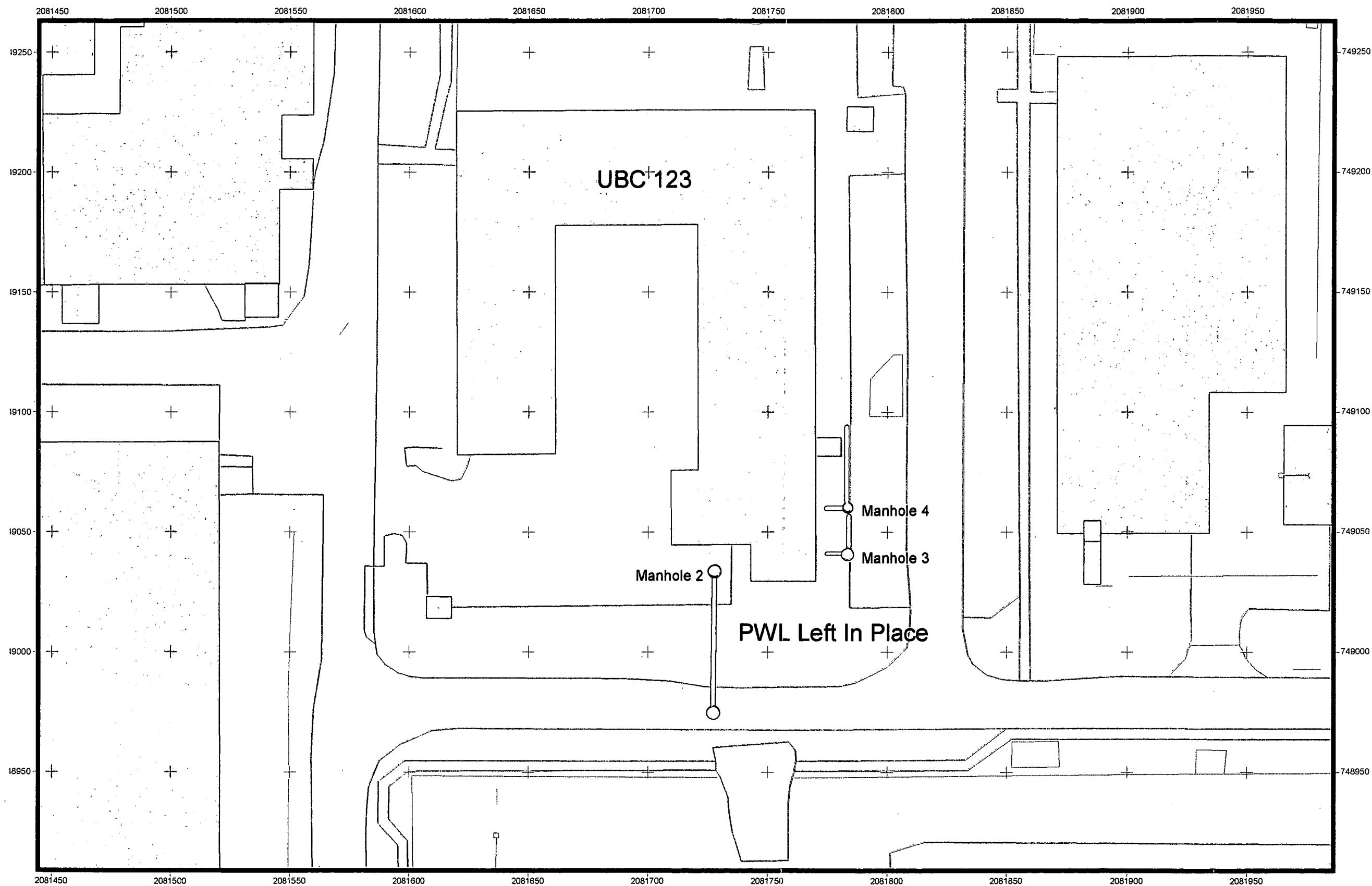


Figure 18
NPWL and OPWL
Left in Place

- FY 2002 IHSS locations
- FY 2002 PAC locations
- FY 2002 UBC locations
- Buildings and other structures
- Process Waste Line - Left in Place
- Paved areas
- Dirt roads
- Streams, ditches, or other drainage features



Scale = 1:500

10 0 10 20 Feet

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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56

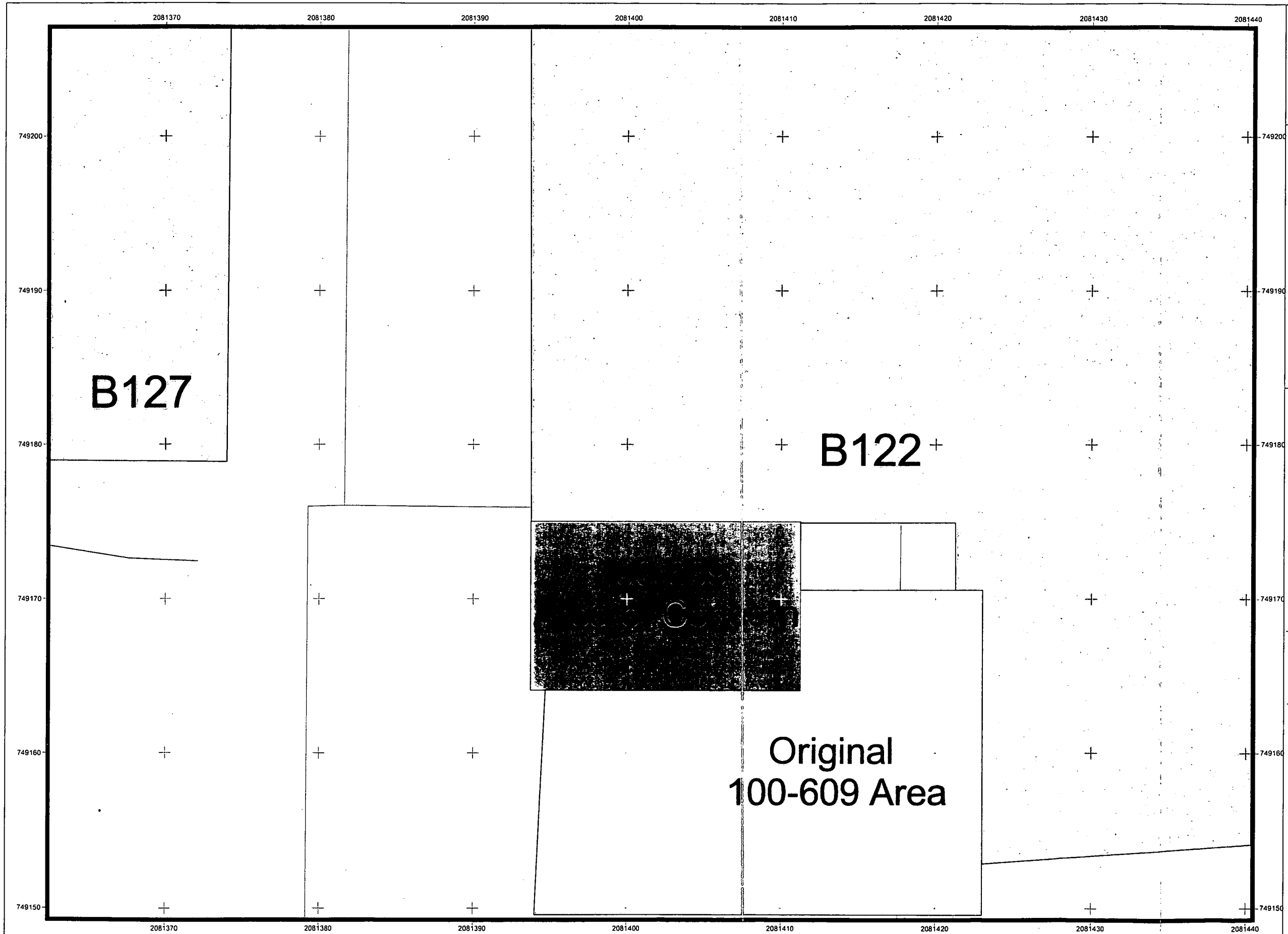

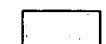

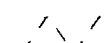




Figure 19
IHSS Group 100-5
Area of Concern

KEY

-  100-5 AOC
-  Building
-  Original 100-609 Area
-  Dirt Road
-  Paved area
-  Stream, ditch, or drainage



Scale = 1:75

2 0 2 4 Feet

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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69

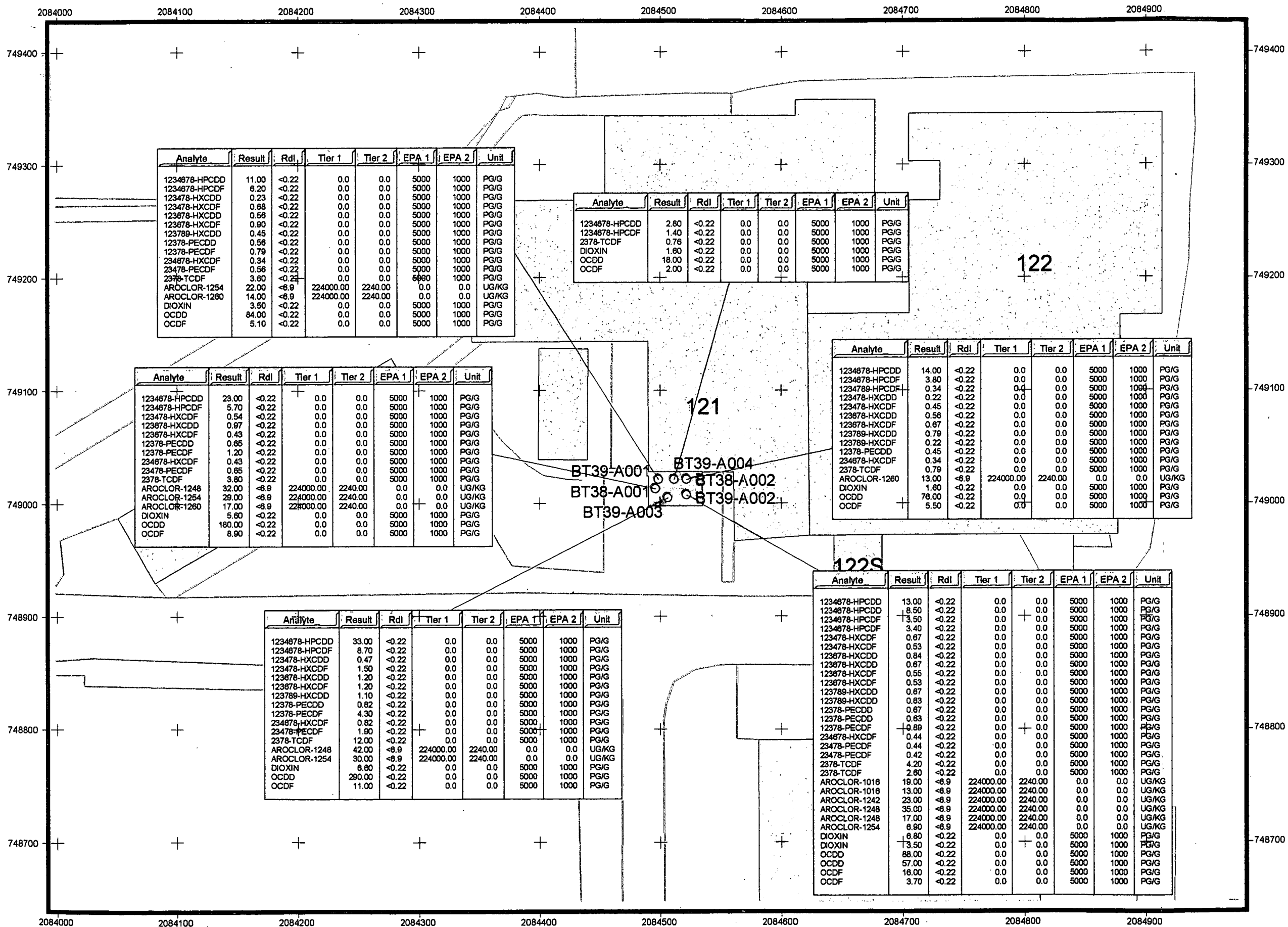


Figure 20
Sampling Results Greater
Than Method Detection
Limits at IHSS Group 100-5

Key

- Surface Soil Sampling Locations
- PAC 100-609
- Buildings and other structures
- Paved areas
- Dirt roads
- Drainage Features



Scale = 1:250

9 0 9 18 Feet

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State Plane Coordinate Projection
Colorado Central Zone
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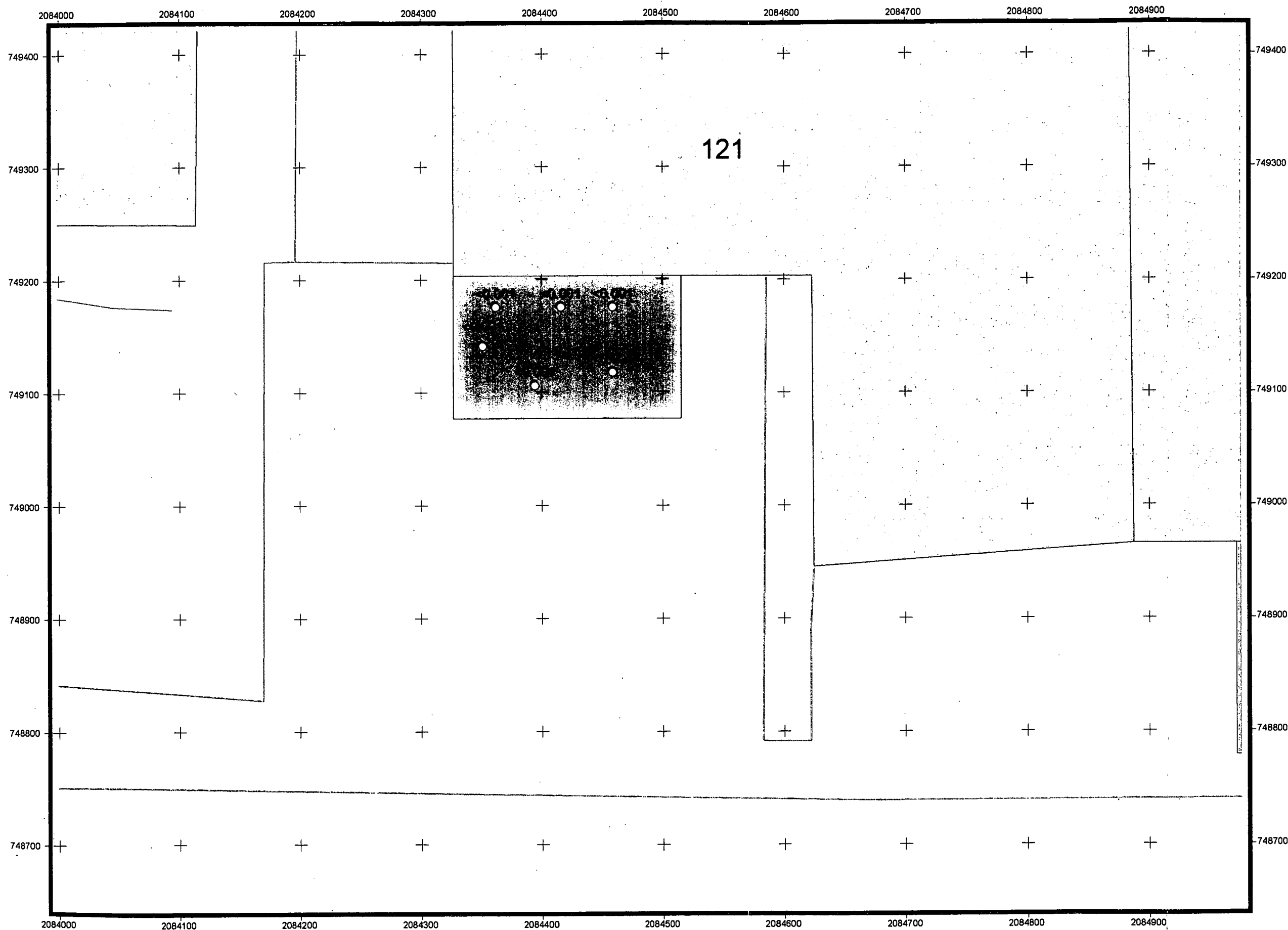


Figure 21
RFCA Tier II
Nonradionuclide
Sum of Ratios at
IHSS Group 100-5

Key

- Surface Soil Samples
- ▭ Buildings and other structures
- ▭ PAC 100-609
- ▭ Paved areas
- ▭ Dirt roads
- ▭ Drainage Features

N

Scale = 1:100

2 0 2 4 Feet

State Plane Coordinate Projection
 Colorado Central Zone
 Datum: NAD 27

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21